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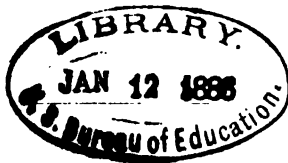
ORGAN OF THE

STATE TEACHERS' ASSOCIATION

PUBLISHES OFFICIAL OPINIONS OF THE

SUPERINTENDENT OF PUBLIC INSTRUCTION.

7326



EDITOR AND PROPRIETOR:

WILLIAM A. BELL.

VOLUME XXVIII.

INDIANAPOLIS:
No. 12, JOURNAL BUILDING.

1883.

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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

JANUARY, 1883.

No. 1.

THE INDUCTIVE METHOD OF TEACHING.

GEO. P. BROWN, PRES. STATE NORMAL SCHOOL.

THE method of doing any thing is the order of procedure by which the thing is done. The method of teaching a child a new fact is the way or path by which the child's mind is led to the acquisition of the new knowledge. If the method is always in harmony with the natural order of the mind's acting, then training and discipline result. A methodical mind is a mind trained to act in obedience to the order in which its nature would prompt it to act if it were free from all unnatural bias or habit.

There are two different orders or methods of the mind's movement from old knowledge to new acquisitions. They are called the Inductive and the Deductive Method. These are both methods natural to the mind, and each supplies the mind with a peculiar class of acquisitions.

Observation and experience give knowledge of particular things. The objects which one sees, touches, tastes, smells, and hears are particular things. Each emotion I experience is a particular emotion. When I compare the large number of particular things known by observation I find some of them to have certain elements in common. If I compare fifty particular apples with each other I discover some characteristics common

to them all; I find something in which they all agree. There is a certain agreement in form, in taste, in skin, in pulp, in seeds, in cause that produced them, in use made of them, and the like. These agreements among these fifty particular things are thought together and called the general notion, which is named apple.

By taking from one of the apples every thing in which it differs from each of the others, there remains the general notion, or that which is common to these fifty particular things. It is natural for the mind to thus proceed from the knowledge of particular things to the acquisition of general notions. This method is inductive in so far as the order of procedure is from the particular to the general. But the general thus obtained is only that which is common to these fifty individuals which have been observed.

It is not the result of a process of reasoning, but arises immediately from the act of comparison. We know the general just as directly and immediately as we know each individual. The universal notion, apple—that which is common to all particular apples which now exist, or ever have, or ever will exist, arises in a different way. When I observe the condition and cause of the apple I find that a certain kind of tree, growing in a certain kind of climate and soil, produces the apple. I infer that wherever these conditions are supplied nature will produce particular apples, having all the essential characteristics that were found to be common to the fifty particular apples which I compared. I can see no necessary reason why the apple-tree should not produce a peach or a cherry. But since it has never been known to do this, and believing that there is a cause at work in the apple-tree that will always produce the same effect that it always has produced, I infer that every particular apple-tree that is, has been, or will be, contains those elements, essentially, that constitute my first general notion. By this or some similar process the mind is furnished with the general notion, apple.

The method by which it has made this new acquisition is the Inductive Method. While forming this general notion it has accumulated material for many others. I have observed sufficient data to lead me to infer certain laws. I infer that the

apple will not grow in very cold nor very hot climates; that there must be a certain degree of moisture; that a certain character of soil is needful; that the fruit is perishable; that a certain degree of cultivation and care is needful for its proper growth and maturity; that the quality of the fruit may be improved by a judicious system of engrafting; that the apple can be used in a great variety of ways and result in a great variety of products, etc. Each of these new discoveries has either added something to or subtracted something from my general notion, apple, as known to me before the new acquisition was made.

Now all of these general laws and principles governing the growth and use of the apple are general notions, the result, when first discovered, of inference from the observation of a certain number of particulars. It is by the Inductive Method that mind originally gains possession of general ideas which constitute so large a part of its acquisitions. What is inductive teaching? The answer now can be readily understood. It is leading the pupil to form general notions, to discover general laws and principles governing things, through the analytic study of the things themselves. When rigidly pursued it requires that every general notion, whether definition, principle, or law, shall come as the result of the observation, analysis, and comparison of particular things. It requires that the child discover every thing; that every element in a definition or a law be seen before the statement of the definition or rule be formulated.

The above may serve as a brief answer to the question, What is meant by the inductive method of teaching? It is the method of discovery. All new discoveries of scientific truth must be by the inductive method of procedure. But as a method of instruction, whereby the learner is to come into the possession of knowledge already discovered by the race, the inductive method, rigidly and exclusively pursued, must result in disappointment and failure.

The nature of the Deductive Method, and the relation which these two methods should hold to each other in school instruction, will form a subject for another paper.

A CHAPTER OF EDUCATIONAL HISTORY.

HENRY A. FORD, A. M.

ONE of the most interesting papers in the history of popular education in the New World is supplied by the organization and maintenance for about fifteen years, of "The Western Literary Institute and College of Professional Teachers." This, notwithstanding its comprehensive name and the wide geographical scope of its constitution and corps of officers, was in practice chiefly a Cincinnati institution, in which city its meetings were held. It had there two or three predecessors, somewhat distinguished in their own day. The second association of teachers for professional improvement, formed in the United States, is believed to have been organized in Cincinnati so long since as 1822—just sixty years ago. Its name, within the writer's range of inquiry, has not been preserved. It had only fourteen members; and, as more than half of these went out of the city or the profession within a short time, the society soon ceased to exist. Seven years afterwards, however, in 1829, one of the most notable organizations of the kind ever formed anywhere took its rise under the name of "The Western Academic Institute and Board of Education." It was organized, in the terms of its constitution, "to promote mutual improvement, harmony, and energy amongst teachers, co-operation in parents, ambition and application amongst scholars, and, finally, to adopt and bring into universal operation the most approved and efficient modes of education." It had at first but about a score of members; yet among these were some of the most noteworthy teachers and friends of education among the pioneers of academic and public instruction in the Queen City. The president was Elijah Stack; first vice-president, Caleb Kemper; second vice-president, John Easterbrook; C. B. McKee, recording secretary; Milo C. Williams, corresponding secretary; Alexander Kinmont, treasurer; Stephen W. Wheeler, librarian; Albert Pickett, Nathaniel Halley, Josiah Finley, D. Davenport, John Hilton, Timothy Hammond, and Moses Graves, counsellors.

This society was the lineal ancestor of the "The College of Teachers." It held its first annual meeting with much success in 1830, and the next year it was determined to enlarge its sphere of membership and influence by the formation from it, in the first instance, of "The Western Literary Institute and College of Professional Teachers." Its doors were open to entrance from so wide a range of the country that its officers were finally selected from eighteen states and territories, viz.: Ohio, Indiana, Illinois, Missouri, Michigan, Wisconsin Territory, Iowa Territory, Kentucky, Tennessee, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, North Carolina, Virginia, and Pennsylvania. Its objects were declared to be "to promote the cause of education, to foster a spirit of intellectual culture and professional skill among its members, which will fit them for enlarged usefulness to themselves and their fellow-men, and to establish the name and character of a liberal profession." The last clause is very well worth a moment's special attention, in view of its enactment by a society of teachers more than half a century ago, when, as most of us are apt to think, the idea of a "profession" of teaching had scarcely yet been entertained.

An extract from the prospectus issued will indicate the highly practical notions which underlay the organization :

"It is contemplated by the College to form district associations or school institutes throughout the country, and to have delivered in them courses of lectures by persons appointed for the purpose, embracing subjects of a literary and practical nature, with appropriate illustrations of the most successful modes of teaching, and to lay before school committees, parents, and teachers, all the important information that can be collected from any source."

This was undertaking too much, however, for that time, and with the limited means that could be commanded. As a matter of fact, but one "school institute" was founded, and that in Cincinnati's own county, where a prosperous and useful association was formed, that met quarterly for many years. But the College, as the Continental volume on Education in Ohio gives testimony, "by its discussions and the publication of the ad-

dresses delivered at its annual meetings, created a wide-spread sentiment in favor of liberal culture, and aroused public attention to the necessity of universal education in a republic."

A very important service was rendered by the society to the State of Ohio during the years next preceding 1838, in the creation of a popular sentiment and impulse that, conjoined with its own more direct efforts, resulted in the passage of a law for the appointment of the first State Superintendent of Schools elected or appointed in this country (Samuel Lewis, 1837), and others founding a system of common schools in that state. It was in pursuance of a resolution adopted by the College, that a large convention of teachers and friends of education was held at Columbus, January 13, 1836, to which Prof. Calvin E. Stowe—husband of Harriet Beecher Stowe, whom he married at Cincinnati—made an important report concerning education in Prussia, to which country he had been accredited by the Governor of Ohio, at the instance of the College, as an agent to investigate its scheme of public instruction. His report was duly debated, and recommendations were made in the shape of a memorial to the State Legislature, every one of which was subsequently incorporated into the school laws.

The membership of the College, indeed, included an extraordinary number of able men and women, most of whom were then, or afterwards became famous. The Beecher family at that time resided on Walnut Hills, now a part of Cincinnati, where the great Dr. B. was President of Lane Seminary. He was then in the prime of his splendid powers, and lent much interest and value to the papers, addresses, and discussions of the society. Upon the roll of members in 1840 appear also the names of Edward and Charles Beecher, and the modest signature of H. W. Beecher, who was then a young man of twenty-seven. Bishop (since Archbishop) Purcell was an active member, notwithstanding his uncompromising Catholicism. Dr. Wm. H. McGuffey, author of Readers and other text-books, was then a resident of Cincinnati, as also Mrs. Lydia H. Sigourney, and Caroline Lee Hentz; and all took prominent part in the transactions of the College. Dr. Alexander Campbell, founder of the powerful

denomination of Christians popularly named from him; Dr. Joseph Ray, writer of arithmetics and other text-books in mathematics; Professor C. E. Stowe, Nast, the Bible commentator, Mitchell, the astronomer, and of course all the leading teachers of Cincinnati, were live members. All the Indiana names are not easily identified upon the roll of the College, at this distance of time; but there were some, and good names, too. The officers from that state in 1839-40 were: Pres. Andrew Wylie, of the State University, vice-pres.; Pres. E. W. Baldwin, of Wabash College, Rev. E. D. McMaster, Judge Blackford, and S. Merrill, directors—to whom were added the next year Mr. J. Ammen, of Bloomington. He had assigned to him, as a subject for report in 1841, "The introduction of military exercises and discipline into colleges and academies"; and the same year Pres. Wylie was committee on "The best means of elevating the profession of teaching."

The late Hon. E. D. Mansfield, author, among many writings, of a book on American Education, was himself a member, and says in one of his books: "I doubt whether in one association and in an equal space of time there was ever concentrated in this country a larger measure of talent, of information, and of zeal. * * It was a means of great intellectual development. * * In its meetings I have heard such discussions as I have neither heard nor read of elsewhere."

Some of these discussions, so far as they were conducted in essays and addresses, are, happily, still accessible in several neat volumes published by the College. Two of them, picked up for a trifle at a book-stall in Cincinnati, are among the most highly prized pedagogic possessions of the writer. In another article it may be practicable to give some review of, and extracts from their contents, most of which have high value to this day, and are not likely to become altogether obsolete to the end of time.

The annual meetings of the society usually occupied the whole of a secular week, and the largest churches in the city were required for their attendants and visitors. They furnished yearly reunions and intellectual revivals that are still notable in the history of Cincinnati. In 1845 the meetings ceased, for reasons

that remain to be recorded; but the College left a name and a memory in the great western land that its educators should not willingly let die.

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AN EPISODE IN THE LIFE OF A. BRONSON ALCOTT.

Two years ago, Mr. Alcott visited Indianapolis and gave several parlor lectures, or as he called them, "conversations." He did most of the talking, and others merely asked questions. Some of these conversations were very entertaining. Mr. Alcott is now 83 years old, and was in his earlier life a teacher with ideas far in advance of his time. He has for many years lived at Concord, Mass., and known intimately Thoreau, Emerson, Margaret Fuller, Hawthorne, and other noted persons. He is now president of the "School of Philosophy," held each summer at Concord. His daughter Louisa is author of "Little Women," "Little Men," "Old Fashioned Girl," etc.

The following notes of one of his "conversations" were taken by Mrs. Mary A. McGregor, then a teacher in the Indianapolis high school.—[ED.]

BRONSON ALCOTT, when in Indianapolis, in January 1881, in one of his conversazioni in a private parlor, among other sayings, which are here recorded, gave an account of his experience in Fruitlands, a farm blessed with a single apple-tree, on which he, his family, and a few other transcendentalists (?) tried to live an ideal life.

He began by saying that he didn't know on what subject he should speak, but he thought if he talked along awhile, the sympathy expressed in the faces of his audience would lead him into the right vein, so he "talked along awhile" on "conversation" and "temperament," and how blue eyes and blonde hair indicated one disposition, dark eyes and brunette complexion another. Then he uttered the following epigrams, but not disconnectedly, as the writer was obliged to take notes of them:

"I consider modesty the best of accomplishments." "A visionary is good for nothing in this world unless some one takes care of him." (How true in his own case, but the some ones were found for him in his wife, Mr. Emerson, and his daughter Louisa.) "A higher civilization must spring up here in the

West than is possible in New England. These broad prairies must give breadth to the mind, while there the thinkers have depth to their thoughts, instead of breadth, perhaps owing to the height of their hills and the narrowness of their valleys."

In answer to the question, "Would you teach girls and boys in the same way precisely?" he said, "Yes! I would teach boys and girls in the same classes; they will make the different appropriations for themselves, just as I suppose boys and girls eat the same food, and adapt such elements as are suitable"—"Shakespeare made a better woman than ever existed." (But when asked to name the particular heroine, he declined to do so.) "The ideal woman and the ideal man will be just alike." "Christ realizes the perfect man, including the perfect woman." "Emerson is almost a woman. . He has no logic, but is full of intuitions."

"Ideas are the riches of the world. We ride on ideas in the railroad coach." "Aristotle had the same thought when he gave his definition that 'a ship is all but the wood.'"

"Religious creeds expand, take on the culture of the times. Unitarianism is a failure, for it is planted on only the humanity of Christ." Here the hostess, a zealous worker in the church impugned, interrupted the speaker to say that "it is a failure only in the organization, but in its ideal of seeing God in man and man in God it is a success." She was applauded, and forced Mr. Alcott to acknowledge the correctness of her assertions. He then said that "Trinitarianism is also a failure in an opposite sense, since it has failed to acknowledge the humanity of Christ. There has been a growing sense of this side of Christ's character among orthodox churches the past few years, and in this respect the mission of the Unitarian Church is being accomplished."

"Strictly speaking, when men violate a physical law, they in reality violate a moral law."

Then he talked on suicide, not countenancing it, but still, he said that if a man could not find food, and therefore life, without breaking the ten commandments, he would better "go up."

"All these thoughts do not come to me without once having paid for them in suffering and experience." Then he referred

to a story in his life, which after some hesitation he consented to give, and which in the quaint language and unique style of narrative was both humorous and pathetic.

THE STORY OF FRUITLANDS.

“A visionary and his wife and four little women, once thought they would try to live without violating the ten commandments; i. e., the visionary did, the other parties were not consulted. They would till the soil, and without harming the animals would live a pure life. Their coin should be love, but as no one would sell them land for this, and as an Englishman and his son were going with them, and as he had some gold, perhaps gotten wrongfully, he bought 30 or 40 acres of land with it, and they went there to make a Paradise.

What should they have for lights? Tallow could not be used because animals were destroyed to furnish it. Pine knots would answer, but they cost gold, and their only coin was love. They determined to use the great sun only, and to rise with it, and after dark to sit and talk. How should they clothe themselves? Well, they could wear cloth shoes or none. Perhaps a little wool would stick to the bushes, and perhaps it was only a kindness to shear the sheep; but then how should it be manufactured? That was labor, and labor was not paid in the only righteous coin, on the contrary, it was often a curse. But flax could be raised and be spun at home. They determined to wear linen the year round.

Then their diet! Sugar could not be used, for except maple sugar, it was the product of slavery; nor tea and coffee, because a great deal of corruption went into them. Water should be the drink, and they would use it twice a day for bathing. This would increase the circulation, and so in cold weather they would keep up a warm climate in themselves.

Well, what should they call the place? They believed in a vegetable diet, and especially in fruit. They would call this Paradise, not Eden, but Fruitlands, although the only fruit tree on the place was a solitary apple-tree.

The Englishman didn't know anything about agriculture, so

the visionary tilled the soil. Oxen must not be used, because their consent hadn't been obtained, but a spade could be used. The first year's crops were not very flattering. The wheat had been gathered, but as a visit was to be made, the grain was neglected in threshing-time, and so was partly spoiled. Then they had a great number of visitors, who all consumed part of the produce, but did not pay for it, as gold must not be taken.

A few of the visitors, however, came to stay. There was a Scotchman who presented a very woolly appearance when he came. He didn't believe in clothing, but would gain his heat from the sun; i. e., he was an Adamite or Solarite. Nevertheless he asked Mrs. Alcott if she happened to have a piece of cotton to go down his back and his front, and after she found it he took a pair of scissors, and cut a hole for his head, and so afterwards he went about in his tunic. He was to live on green corn and huckleberries.

A second man came also to stay. Beards were not then worn, but he allowed his beard to grow, and also his hair, until they grew really inconvenient. He said he would never cut his nails, if they were not so much in the way. He drank milk too, he said 'he thought the calves might spare a little.' He was a utility man, saying 'his duty consisted in being useful,' so he helped about the house, washing dishes and cleaning generally.

There was only one woman came to us, for most of them foresaw a failure, and waited their chance to say 'I told you so;' but one came who was to teach the four little women. But unfortunately we soon discovered that she didn't know how to spell nor how to use good grammar. How could she teach? Then she undertook to write poetry, but Louisa laughed at her and wrote it over very much better. She thought the vegetable diet too plain living, and bought herself some cheese, which she put in her trunk, but the rats ate most of it.

So affairs progressed and winter was coming on and the food was most gone, for only the visionary had touched the soil to make it productive, and they had entertained as many pilgrims to Paradise as cared to visit it free of cost.

What should we do? Well, Mrs. Alcott went to her old


school friends, but none of them had any sympathy for the visionary. The Englishman began to talk of taking back the farm which he had before donated for the good of all mankind, and he wished back his part of the library. (But part of this library is going for the permanent Concord School of Philosophy.)

There was nothing to do but go. So off we went in our own carriages (i. e., we walked), for the horses hadn't consented to draw us, and although the steam carriages saved us time, yet they cost gold, and we had none of it.

Then there was a long season of questioning; we could not get food without breaking the ten commandments. Was it not a suitable time for the visionary to go up? He went without food for four days; it was rather hard, but it cleared the brain wonderfully. Thoughts of the wife and children crowded in. Did he not owe a duty to the mother and four little women? He concluded not to go up just then."

HOW SHALL WE SPELL?

BY R. B. MARSH.

 HE Commissioner of Common Schools in his last report, says that the absurdities of our English spelling cost the state well nigh a million dollars to teach, and each generation of youth a worse than useless expenditure of one or two full years to learn. He advocates "common-sense spelling," by which he means, I think, spelling alike all syllables that have the same sound. This, at first sight, would seem to be a great advantage; but, on careful examination of the subject, I am inclined to think that more confusion and labor than good would be the result.

(1.) Many words would be confounded that are now easily distinguished; as, would, wood; waste, waist; capital, capitol; ere, air, e'er, heir; cede, seed; cent, sent, scent; fain, fane, feign; way, weigh; wave, waive; vain, vane, vein; tacks, tax; right, rite, write, wright; stile, style, etc.

(2.) Those who have learned to read by the old method (by

far the largest number) would be put to great inconvenience in reading and spelling by the new method.

(3.) Those who wished to become acquainted with the literature of the past (and who would not?) would be obliged to learn the old spelling, and one would be confounded with the other, and the result would be that they would not spell according to either method.

(4.) The pronunciation differs to such an extent in different parts of the country and even in the same places, that one would say *father*, *fawther*, *fauther*.

(5.) Too much time has been spent in learning and too much money invested in printing, by the old method, for any generation to be willing to make such a sacrifice, even if it were for the good of the rising generation.

(6.) There is great mental discipline in the care and discrimination required in learning to spell and pronounce the English language, and much good may result from it as a disciplinary study.

Our present spelling is not as arbitrary as many would suppose; it is the result of growth and of pruning and training, much of which has been done by scholars well versed in the languages from which ours has been formed.

Many changes in spelling have been made during my recollection, many more I hope to see. We are ahead of the English in the spelling of such words as *honor*, *labor*, (*labour*, etc.) They are ahead of us in spelling such words as *mixed*. When the *d* has the sound of *t*, they put *t* instead of *d*, very sensibly spelling *mixt*, *fixt*, etc. We now spell *plow* instead of *plough*, *hight* instead of *height*, or a still older form *heighth*. If h-i-g-h spell *high*, h-i-g-h-t ought to spell *hight*. We also spell *program* instead of *programme*, which is the Greek form of the word. If we spell *gram*, *monogram*, *telegram*, *phonogram*, surely *program* alone ought not to be spelled *mme*. Omitting a final *k* in such words as *music*, formerly spelled *musick*, was a good change, and there are yet people living that learned the old way.

I would be pleased to see a change in the endings *able*, *ible*, *eble*, in such words as *comfortable*, *possible*, *deleble*, *indelible*--able,

or ible, or eble will suit me; but I can not see the necessity of three, or even of two ways. Catalog, etc., is recommended, when the last syllable is short; but fatigue, and plague, etc., when it is long. The *e* final should indicate that the syllable is long. It is recommended that we spell *lov*, *dov*, etc., when the syllable is short. These changes are without any authority of the dictionaries, as yet; these and many more will come in due time. These changes must, by the law of growth, be slow. Chaucer, who wrote in the fourteenth century, spelled *ther* for *there*, *hadde* for *had*, *geten* for *gotten*, *bokes* for *books*, *litel* for *little*, *frendes* for *friends*, *speche* for *speech*, *poore* and *poure* for *poor*, *hede* for *head*, and *garlike* for *garlic*.

Dr. Johnston's Dictionary was published in 1755, and was the first recognized standard. In early times there was no standard English spelling. The printers added or subtracted letters for convenience of spacing; the same word can be found spelt several ways on the same page. The best teachers and scholars are often poor spellers—it is no sign of a broad and deep mind to be able to spell with great accuracy. A stress is laid on spelling as a sign of a thoroughly educated person out of all proportion to its real value; this has, probably, arisen because it is one of the most rare and costly accomplishments. Much more care should be given to pronunciation, and pupils should be taught to observe the spelling of every word in the Reader, and in all they read, and to use hyphens, apostrophes, and capitals correctly, as these belong to spelling just as much as do the letters. "It's a good thing for the dog to love its master," "Two years' work" and "one year's work." In the above examples "its" and "it's," "year's" and "years'" are not spelled alike. It is on points of this kind that pupils and even many teachers fail in writing; because they learned to spell orally and were not taught to mention the marks as well as the letters. To-day is spelled t-o-hyphen-d-a-y. Too little attention is paid to rules for spelling. A pupil may be able to spell every word in the spelling-book, and yet when he comes to write fail in spelling correctly such words as *freer*, *freest*, *dyeing*, *moneys*, *father-in-law's house*, *striping* and *stripping*, *Jones's*, etc. Many of the rules for

spelling are worse than useless, because not correct. Harvey's, and in fact nearly all the grammars, have this rule: "Most nouns ending in *f* change *f* to *v*, and add *es*; those ending in *fe* change *f* to *v*, and add *s*." This rule is all right if it were true; but I have carefully looked up the words and find that fourteen words ending in *f* and *fe* form their plural in this way, and that more than twice as many form it regularly. I give a list of those that are regular: chiefs, kerchiefs, handkerchiefs, mischiefs, beliefs, misbeliefs, reliefs, bassreliefs, briefs, fiefs, griefs, clefts, semibriefs, oafs, waifs, coifs, gulfs, hoofs, roofs, proofs, reproofs, woofs, califs, turfs, scarfs, dwarfs, wharfs or wharves, fifes, strifes, safes, serfs, and all nouns in *ff* (except staff, a stick), of which there is a large number. Too often rules are given without careful examination of the facts; one borrows from another, and thus mistakes are propagated.

Teach spelling with the reading. Have the hand trained to write correctly, and the eye to detect errors. Teach the rules that are essential. Pupils should be taught, from the first, the diacritical marks, the sound of unmarked letters, and the use of the accent mark. The readers, spellers, and the dictionaries use these marks. Children when they know them can pronounce words thus marked without help from the teachers. The alphabet thus becomes a perfect one to them.

But few teachers can write the declensions of *alley* and *ally*. The London *Times* once said, "Spelling is learned by reading, nothing but reading can teach spelling." Transcribing is, perhaps, the best method. Few persons can copy a page, with all the marks, etc., just as it is in a book. It is recorded that a young man "who won three prizes at spelling-schools, made five mistakes spelling in a note written to a school board."—*Ohio Educational Monthly*.

Ill examples are like contagious diseases.

Seek not for praise, but seek to deserve it.

He who sows brambles must not go barefoot.

BANDS OF MERCY.

REV. OSCAR. C. McCULLOCH.

IT is a beautiful story, that in one of the old cities of Italy, the king caused a bell to be hung in a tower in one of the public squares, and called it the "Bell of Justice," and commanded that any one who had been wronged should go and ring the bell, and so call the magistrate of the city and ask and receive justice.

And when, in course of time, the lower end of the bell-rope rotted away, a wild vine was tied to it to lengthen it; and one day an old and starving horse, that had been abandoned by its owner and turned out to die, wandered into the tower, and in trying to eat the vine, rang the bell. There the magistrate of the city, coming to see who had rung the bell, found this old and starving horse. And he caused the owner of the horse in whose service he had toiled and been worn out, to be summoned before him, and decreed, that as this poor horse had rung the "Bell of Justice," he should have justice, and that during the remainder of the horse's life his owner should provide for him proper food and drink and stable.

During the last few years the sufferings of dumb animals have called into existence societies for the "Prevention of Cruelty to Animals." The name of Henry Bergh, of New York, at once comes to mind as one who has been the agent in calling public attention to the rights of the lower animals. Through the influence of these societies laws are passed protecting animals from cruel usage, and by means of police the law is enforced, which prevents men from ill-treating those who can not speak for themselves.

The good done has been great. The societies have come to be respected and feared. But it is now seen that the preventive work is not enough. The law may be evaded. The watchful eye can not see everywhere. Why not go deeper? Why should there be any disposition to treat cruelly any harmless living creature? Why not establish a noble protectorate over them on the part of the stronger, the man? Why not begin a work of edu-

cation as to the place of animals in the order of nature, the rights of animals and human duties? It is in the line of these thoughts that the origin and ends of Bands of Mercy must be traced. Bands of Mercy are the children's crusade to rescue dumb animals from the abuse of human dominion.

It is only of late that animals have been put outside the range of human sympathy. In early times they were judged as were men, according to their acts. In Athens one of the laws declared that no one had a right to inflict a wrong upon a living creature. In Greece the care which the young of the stork gave to the old parents gave rise to what was called the "law of the stork," by which children were obligated to take care of their parents, and those who refused were declared infamous.

So this new movement is in the direction of re-knitting the social union which man's dominion has broken. It is an attempt to call in a higher than a civil law which *prevents*—a law which *protects*. It is doing but little to punish a drover or cartman. It is doing much when children are taught the rights of animals to live and to enjoy life.

In the "Band of Mercy" the children pledge themselves thus: "I will try to be kind to all harmless living creatures, and will try to protect them from cruel usage." Like other good things it began in a woman's heart. It was founded in England by Caroline Smithers. She saw the cruelty practiced upon animals, and of the children upon each other. She saw that in teaching the children to be kind to animals she was also preventing cruelty and crime among them. In one of her letters she wrote, "I think that teaching children to be kind and merciful to God's lower creatures is preparing the way for the gospel of Christ."

It was quickly spread through England. One society, called the "Dicky Bird," numbered thirty-seven thousand. It was introduced into this country by Rev. Thomas Timmins, and the Massachusetts Society for the Prevention of Cruelty to Animals became the parent society.

This is not play-work. It is a dead-earnest attempt to teach lessons of kindness. It has spread like a wave over the country. It has been woven into the Sunday-school and public school

system, It has enlisted the old and the young. My attention was first called to it by the announcement that "Governor Long of Mass., had joined the Band of Mercy." Then I saw the name of Wendell Phillips. It certainly was good company to be in. In Philadelphia 3000 children in the public schools were members in October.

And what is the method? It is simply signing a card prepared by the Massachusetts Society: "I will try and be kind to all harmless living creatures, and will try to protect them from cruel usage." Societies may be formed thus: After talking the matter over pass a simple resolution—"Resolved, That we will form a Band of Mercy, to be called _____ Band of Mercy." Send to the Massachusetts Society for cards, etc., which cost two cents each, and for other printed modes. Elect officers and hold a public meeting. Have an address on the idea, and have the children recite pieces or tell anecdotes illustrative of animals. Secure more and more members, children two cents, adults ten cents, because they did not join when they were young. These meetings may be monthly. They will soon be an enjoyable feature of the Sunday and public school.


This is simple but it is deep-reaching. It does not end with the animal. It seeks to put down all cruelty. Its aims are far ahead. It would stop war and furl the war flag,

"In the parliament of man, the federation of the world."

St. Francis of Assisi called all animals "little brothers." Hawthorne, in the Marble Faun, hints of an ancient union between man and beast. Thoreau showed how close we might come to them if we would. Waterton lived in their affection. Wordsworth pleads their cause in Hartleap well. Coleridge in the Ancient Mariner, and Burns in the Field Mouse.

"He prayeth well who loveth well
Both man, and bird, and beast;
He prayeth best who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all."

MR. MOON'S ENGLISH.

e do not know Mr. G. Washington Moon, the self-appointed guardian of the English language, personally, but we should imagine he must be a troublesome person to converse with. If not, his works belie him. We picture him speaking—in the ordinary converse of life—somewhat as in the following imaginary scene:—

Traveller (meeting Mr. Moon).—Can you tell me, sir, where this road goes?

Mr. Moon (*aside*).—He should have said, “If you can, *will* you tell me?” (*Aloud.*) Sir, the road does not go anywhere, it remains always here.

Traveller.—Pardon me. I should have said, “Where does this road lead?”

Mr. Moon.—To lead, sir, is to go before—to guide, (*vide Webster, Worcester, and Walker, especially Walker.*) The road can not go before you.

Traveller.—I perceive, sir, you are precise. I want to know where I shall arrive if I follow this road?

Mr. Moon.—You can not follow that which is at rest, for the word *follow*—

Traveller.—Excuse me, my time is limited. Where shall I arrive if I travel on this road?

Mr. Moon.—Your query is wanting in precision. Where you arrive will depend principally on the duration of your progression.

Traveller (*after a pause*).—Supposing I should walk upon this road at a rate of, say, four miles per hour, during, let us suppose, two hours, what are the various places through or near which my walk will bring me?

Mr. Moon.—This is very painful. There are no less than seven mistakes of the most glaring kind in the sentence you have just spoken. Your use of the word “supposing” is quite inaccurate. Who are supposing? Then, having already used the word once, you should not have used it again in the same

sentence. Again, what does "say" mean? Also why use the Latin word *per*, when "in an" would have served your purpose? You speak of *various* places. But the word *various*, so used, is quite unmeaning. If it were not redundant it would be incorrect, for the word *various* implies that the objects to which it is applied vary from each other. Now, the places through which you have to pass may, for aught you know, be precisely alike. Further, you should not have said "my walk," but "my walking." The word "bring," also, is inappropriate. I will go home and write an essay on each of the questions which I have raised respecting your incorrect language; and——

Traveller.—In the meantime, will you kindly tell me what I want to know?

Mr. Moon (*aside*).—He does not mean "in the meantime," but *before that*. (*Aloud.*) No, sir; that is what *you* should tell *me*. Not to speak of telling you, how can I even *learn* what you want to know, when you fail to express yourself in terms at once clear and accurate. Permit me to quote for your edification a passage from the preface to my treatise on the "Revisers' English." "The mind which allows itself complacently to delight"

Traveller.—How about tautology? [*He goes upon his way.*]

Mr. Moon.—(*Aside.* A most inexact expression!) Understand, sir, that in what I write no one has ever yet detected imperfections—"complacently to delight," I say (*raising his voice*) "in anything below the highest standard of excellence, is thereby dwarfing its faculties; for (*louder*) we become assimilated to that which we worship, and (*shouting*) [we] are ennobled or debased by the influence of that upon which our minds dwell with satisfaction." He is beyond hearing; I will write a series of letters for *Public Opinion*, and point out his multitudinous errors. I *will* be heard; he shall (Saxon, *scealan*) listen to me.—*Knowledge.*

Our night dreams partake of our day thoughts.

Nothing is more attractive and lovely than modest simplicity.

OFFICIAL DEPARTMENT.

STATE OF INDIANA,
DEPARTMENT OF PUBLIC INSTRUCTION, }
SUPERINTENDENT'S OFFICE,
INDIANAPOLIS, Dec. 15, 1882. }

CONTRACTS WITHOUT LICENSE ILLEGAL.

Sir:—You ask, "Can a trustee make a legal contract with a teacher without seeing his license to teach?"

Yes. If the teacher has a valid license to teach, at the date of his employment, the contract is legal; if he has no license at that time the contract is void.

The trustee should satisfy himself that the teacher holds a valid license to teach before making a contract with him, and, hence, the trustee has the right to demand that the teacher shall produce his license.

Very respectfully yours,

JOHN M. BLOSS,
Sup't Public Instruction.

STATE OF INDIANA,
DEPARTMENT OF PUBLIC INSTRUCTION, }
INDIANAPOLIS, Dec 15, 1882. }

LEGAL HOLIDAYS.

Dear Sir:—In your letter of Dec. 10th, you ask, "Is a teacher allowed pay for Thanksgiving Day, if he does not teach on that day?"

That depends wholly upon your contract. If you dismiss school on your own account, I think you could not recover pay.

If the schools are dismissed by order of the trustees, you would be entitled to pay, unless you had, in your contract, agreed not to teach on that day.

Truly yours,

JOHN M. BLOSS,
Sup't Public Instruction.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

DOES your subscription to the Journal expire with this issue? If so renew at once, that there may be no break in your file. Do not fail to send in time to secure the January number.

HINTS TO SUBSCRIBERS.

The following "Hints to Subscribers," clipped from the *Christian Union*, so exactly hits the experience of the editor of the Journal that he gives it space in the editorial department and indorses it in full. He commends the article most heartily, and hopes that the readers of the Journal will not skip it.

"HINTS TO SUBSCRIBERS.—Always be careful to omit the name of the state from your address. The publisher is supposed to know the state in which every subscriber lives. It is useful sometimes to sign your name, but if the publisher does not recognize your handwriting and enter your name correctly at once he ought to resign and give way to some one who can.

If you have a torn or doubtful bill, that you haven't the courage even to put in the contribution box, send it along. The publisher has peculiar facilities for selling defaced currency and counterfeit bills at a premium.

If for any reason you do not receive your paper promptly, write the publisher a sharp letter. Call him a swindler, or some similar pleasant epithet. It indicates true Christian forbearance on your part, and produces an agreeable effect on him.

If you enclose (by mistake) a stamp for reply, paste it carefully and firmly on the letter. The effort to remove without destroying it is sure to make the publisher s—mile.

Be particular not to prepay your letter. It affords the publisher infinite delight, at a cost of only six cents, to send to the Dead Letter office for it.

If disposed to prepay at all, put on a one-cent stamp. This enables the publisher to pay five cents more on receipt of the letter, and his happiness will be incomplete without it.

Always take it for granted that the subscribers never make any mistakes, and that the publisher is responsible for all errors and delays.

If a mail car is destroyed by fire, charge it on the publisher. If a heavy storm delays the trains, charge it on the publisher. If there is a miscarriage of any kind, charge it on the publisher. And the severer the language used, the greater his enjoyment.

A violation of any of these rules by some folks, will cause great surprise to publishers and take away much of their enjoyment."



WILLIAM TORREY HARRIS.

William T. Harris, LL. D., was born in North Killingly, Conn., September 10, 1835. He is a descendant, on his father's side, from Thomas Harris, one of the original founders of Rhode Island. His mother was a descendant of William Torrey, who came from England to Massachusetts in 1640. He was educated at a country school in Connecticut, and attended academies at Woodstock, Conn., and at Andover and Worcester, Mass. After teaching several terms he entered Yale College in 1854. He remained there but three years,

and never graduated, but the college conferred upon him the degree of A. M., unsolicited, as President Woolsey wrote, "In consideration of your services to the cause of education and to that of philosophy." The degree of LL. D. was afterwards conferred upon him by the University of Missouri.

Mr. Harris began teaching in St. Louis in 1857. He was appointed principal of the Clay School—the first graded school in the city, in 1859, and eight years later was made assistant superintendent. In 1868 he was elected superintendent of the schools, and continued to hold that position till 1880, when he resigned. So valuable were his services as superintendent that upon his retirement the leading citizens of St. Louis presented him with a tastefully designed gold medal, bearing on one side the names of noted educators and philosophers, and upon the other a laurel wreath encircling the following :

"From Citizens of St. Louis to William T. Harris, LL. D., in grateful recognition of twenty-three years of faithful service as Teacher, Principal, Assistant Superintendent, and Superintendent of the St. Louis Public Schools—1857-1880."

He was also presented with a letter of credit for \$1,000 for defraying his expenses on a prospective trip to Europe.

After spending some time in Europe, studying systems of education and their philosophy of education, he returned to this country and took up his abode at Concord, Mass., and is living in Hawthorne's "Old Manse." He is editing his *Journal of Speculative Philosophy*, lecturing on educational and art subjects, and writing for various magazines. A part of each summer he spends in lecturing in the "Concord Summer School of Philosophy."

He is the acknowledged leader of speculative philosophers in this country, and no man in America stands higher as an educator than does he. He is known to the rank and file of teachers principally through his St. Louis "Reports" and his joint authorship of Appletons' Readers.

His lectures and writings are not "popular" with the masses, for the reason that they always discuss principles rather than methods, and are not always easily comprehended. He never speaks without saying something, and one who follows him is always profited. He is pre-eminently the student—philosopher—educator of this country at this time.

THE USE OF TOBACCO BY BOYS.

The Journal has never been fanatical or even radical on the subject of tobacco-using. It has never denounced it as a crime, or placed it on a par with the drinking of spirituous liquors. It has never denounced in severe terms, even teachers, who use tobacco.

It has, however, from time to time called attention to the incon-

venience, the expense, the (oftentimes) offensiveness of the habit, and has repeatedly spoken of its injurious effects upon the bodies and minds, if not the morals of boys and young men. All high medical authorities agree that the use of tobacco is injurious to growing boys; and this being true, no teacher can do his full duty who does not impress this fact upon the boys under his influence. The following from the *Medical and Surgical Reporter* is high authority, and will make good reading for the school:

"The use of tobacco by growing boys is so generally recognized as pernicious that it is extraordinary that more energetic measures are not urged upon those having the care of youth to prevent the habit. Already it has been prohibited in the United States Naval Academy at Annapolis, in the United States Military Academy at West Point, in the Phillips Exeter Academy, New Hampshire, and in various other enlightened educational institutions.

This was not the result of prejudice or hobbyism. If any set of men are free from these vices of learning, it is the naval surgeons, and it was especially from these, and particularly from Dr. A. L. Gihon, U. S. Navy, that this attack on the weed began. The indictment laid against it charged: That it leads to impaired nutrition of the nerve centers; that it is a fertile cause of neuralgia, vertigo, and indigestion; that it irritates the mouth and throat, and thus destroys the purity of the voice; that by excitation of the optic nerve, it produces amaurosis and other defects of the vision; that it causes a tremulous hand and an intermittent pulse; that one of its conspicuous effects is to develop irritability of the heart; that it retards the cell change on which the development of the adolescent depends.

This is a formidable bill of particulars, and yet each of these charges is preferred by the best modern authority, and, what is more, each is substantiated by an abundance of clinical evidence. Testimony is also adduced from the class records of schools and colleges, which indicate very positively that the effect of tobacco on the mental faculties is deteriorating. The best scholars are not tobacco users; non-smokers take the highest rank in every grade; and whether we look at the exceptionally brilliant students, or compare the average of those who use and those who refrain from tobacco, the result shows the same."

A STATE NATURALIST.

We now have a State Geologist who has done and is now doing much to make known and develop the mineral resources of the state. He has added to the wealth of the state many fold his salary. With the aid of the State Museum he can readily answer most if not all geological questions referred to him. Prof. John M. Coulter, of Wa-

bash College, in speaking on this subject in the *Indianapolis Journal*, sets forth the necessity of a State Naturalist as follows:

"Geological questions have already learned that this is the place for reference, but the thousand other questions which puzzle the agriculturists and horticulturists of our state have no such easy reference, hence a most lamentable ignorance upon subjects which strike at the very roots of our prosperity. Certain strange and annoying weeds appear; some new and mysterious fungus begins to attack the most carefully-cultivated plants; some noxious insect becomes a regular besom of destruction, and to every one comes the question, What are these? and how can we guard against them? But who can answer? There is plenty of ability in the state to furnish answers, but it is not attainable, and is for the most part unknown. Hence one of the most important positions to create in connection with the Geological Survey, is that of State Naturalist, one who is so skilled in the use of the microscope and so well known to the naturalists of the country, that he can either authoritatively answer all such questions himself or knows where they can be answered. With such a position worthily filled, all such questions would naturally gravitate to its incumbent, and in his annual reports such knowledge would be generally diffused throughout the state, and thus become productive. Knowledge applied is what we need. Knowledge we have, plenty of it, and the office proposed is a scheme for applying it. This would give a greater impetus to our agricultural interests than any other one thing, and put us on the high plane occupied already by many of our sister states."

The reasonableness of this suggestion is very apparent, and it should be brought to the notice of the incoming Legislature.

THE LEGISLATURE.

The State Legislature will convene early in January, and we may look for the usual number of bills proposing to amend the school law. Without doubt our school law could be improved in some minor particulars, but in the main it is good. It has grown with the state, and is better suited to Indiana to-day than would be the laws of any other state in the Union. The tendency is to change laws too frequently. By the time the people know the provisions of a law and begin to adjust themselves to it the Legislature changes it. This has a tendency to destroy respect for law. Unless a law can be *materially* improved, it would be best to leave it unchanged. So far as possible these sentiments should be urged upon our law-makers.

CO-EDUCATION.

The University of Pennsylvania has recently decided *not* to admit some young women who asked the privileges of the institution. After a labored canvass of the subject the trustees decided that it would not be "proper" for young women to recite in the same classes with the young men; but graciously added that at some future time they would perhaps erect a separate institution for the ladies, and to do this would cost about \$300,000. The mother of one of the rejected ladies has sent the trustees \$1 toward this amount, and the trustees do not know what to do with it.

As is usually the case under such circumstances, the young gentlemen (?) in the University are opposed to the admission of the ladies.

It is a remarkable fact that old fogies and young "swells" always agree that the admission of ladies to a college would ruin its morals and destroy its scholarship; and this in the face of the fact that the admission of ladies has uniformly improved the manners and morals, and in no instance has lowered the scholarship.

The only qualifications women lack, possessed by the average male student are, they can't unhinge gates, change signs, rob beehives, steal bell-clappers, carry buggies to the top of the college building, tar-and-feather the janitor's old horse, go snipe hunting, —in short, they can't "make a night of it" and have a "bully time."

In all other regards they can hold their own with the "lords."

BANDS OF MERCY.

On another page we print an article on "Bands of Mercy." Let every one read it. The field for work in this direction is broad. Teach children to be kind to the dumb animals, and thus teach them to be kind to each other.

"I would not enter on my list of friends,
Tho' graced with polished manners and fine sense,
Yet lacking sensibility, the man
Who needlessly sets foot upon a worm."

As nothing is ever done of moment without system and concert of effort, the Journal, in order to give direction and a practical tendency to what has been said on this subject, proposes that on Friday afternoon or evening, February 23, 1883, bands of mercy be formed and appropriate public exercises be prepared for the occasion.

If teachers will take an interest in this matter they can easily enlist the sympathy and co-operation of the children. This is not a

matter of sentiment, it is something worthy the earnest attention of every person. This work is only a matter of *right* to the dumb animals, and it will pay many fold in its reflex influence on the minds and hearts of the children and the people.

Not simply the schools, but the entire neighborhood should be interested in this, and the best method of reaching the people is through the public meeting.

With a little effort appropriate exercises can be arranged that will both entertain and instruct.

By writing to "The Massachusetts Society for the Prevention of Cruelty to Animals," 96 Tremont St., Boston, Mass., any one can get all the necessary details for the formation of these Bands, together with pamphlets and literature on the subject, at bare cost. This society publishes a little monthly paper called *Our Dumb Animals*, sample copies of which can be had for the postage.

Teachers, take hold of this matter in earnest; it will not detract in the least from your other work, and it will pay richly.

CONCISENESS IN STYLE.

In teaching children to write the first effort is to induce them to write as much as possible about a given topic. Later, however, the great point should be to express a given thought clearly in the fewest words. A good rule to follow is this: First, write out your thoughts fully on the subject under consideration. Second, revise your composition and cut out from one-fourth to one-half. What is left will contain all the essential ideas, and be more pointed than the first draft.

Conciseness, especially in written speech, is a great virtue. Teachers need to study it—they should teach it. Writing telegrams is an excellent exercise. A minister who was taken to task for preaching a whole hour, apologized by saying that he had been over-worked, and did not have time to make his sermon shorter. Hawthorne is acknowledged to have been a master of a pure English style. You will not find an italic letter in any of his books. His emphasis was in the sense of what he wrote. He used, almost entirely, words of few syllables. There are no big, heavy words in his works. He used no foreign words or phrases, either ancient or modern, in any of his writings. Those who would write well should follow his example. Use short sentences; if long ones, break them up. Have one member of a compound sentence longer than another. Use words to make things clear. Think of your reader; have it before you that he understands just what you have said.

THE STATE'S SCHOOLS.

The forthcoming annual report of the Superintendent of Public Instruction will show the following facts :

Number of school houses—stone, 83 ; brick, 2,481 ; frame, 6,944 ; log, 48 ; total, 9,556 ; number of rooms, not recitation rooms, 3,282.

Estimated value of school houses, including building grounds, seats, etc., \$11,907,391.09.

Estimated value of school apparatus, viz : globes, maps, etc., \$403,513.42.

Total estimated value of school property, \$12,310,904.51.

The special school tax on each \$100, twenty-one cents.

Special school tax on each poll, averages forty-four cents.

Total estimated special school tax, \$1,235,359.06.

Local tax for tuition assessed on each \$100, fifteen cents.

Number of volumes in township library, 274,257 ; number taken out during the year, 305,226 ; volumes added to library, 5,825.

Amount paid trustees for managing educational matters, \$89,392.37.

Number of school houses erected during the year, 303.

Value of school houses erected during the year, \$354,439.81.

Report of private schools—Number of private schools taught in public houses, 365 ; male teachers, 167 ; female teachers, 441 ; number of pupils admitted within the year, 12,852 ; average daily attendance, 8,659 ; average cost of tuition per pupil per month, \$1.17.

Number of township institutes during the year, 4,299.

Common school fund held by counties, June 1882.....\$2,838,675

Non-negotiable bonds..... 3,904,782

Total common school fund\$6,743,458

Congressional township fund 2,463,953

Grand total, June, 1882.....\$9,207,411

" " " 1881..... 9,133,577

Increase for the year..... \$73,834

The average duration of schools for the year ending August 31, 1882, was 133 days. Porter county takes the lead with an average of 164 days, with Washington and Orange bringing up the rear with an average of only 99 days each.

During the year 22,327 teachers applied for license, of whom 9,278, or 41 per cent. were rejected. This is the largest per cent. ever rejected, and shows that the standard of qualification is being advanced.

IF your Journal does not reach you by the 15th of the month, write at once. If teachers delay writing for a month or more, as is often the case, we are often unable to supply the missing numbers.

OWING to the fact that the subscription list of the Journal has been steadily increasing beyond what was expected, the issues for several of the months have been entirely exhausted. A few October and November numbers are needed to complete files, and any one sending either or both these, in good condition, will have the time of his subscription extended one month for each.

READING CLUBS AMONG TEACHERS.

It is a healthy sign to see the formation of teachers into clubs for the study of the principles that underlie all school work. In Clinton, Delaware, Marion, and perhaps, other counties, teachers have formed themselves into classes for the study of subjects that lie outside, or rather beyond the ordinary work done in teachers' meetings. They take such works as *Johonnot*, *Bain*, *Spencer*, or some work on mental science, and *study* it. They meet at stated periods and discuss such chapters as have been previously agreed upon. A good leader makes this kind of work a little easier, but with no leader except one appointed from time to time, to simply direct the work, such meetings and discussions can be made most profitable. The *study* is the chief thing, and the meetings serve as a stimulus to study. But few persons have sufficient power of application to sit down to close study and *continue* it without the stimulus of an after reckoning, or recitation. Besides, no study is so effective as that which is done for the purpose of obtaining information to convey to others. Let many such classes be formed, although no more than two members can be secured.

Never before was there such a demand for the philosophic study of educational problems.

BOYS' REFORMATORY.

The sixteenth annual report of the Commissioners of the Indiana House of Refuge is out, and has come under our observation. From it we learn that since the opening of the institution in 1868, there have been admitted 1,715 boys, representing 87 counties; that eight half-day schools are admirably conducted under the care of competent teachers, and that the condition of the boys and their future temporal and moral welfare is carefully and considerably looked

after. The institution is not, and in the nature of things likely never will be, self-supporting, yet it has contributed largely to its own expenses and necessities. The expenses for the last year aggregate \$45,000, which includes nearly \$5,000 expended on buildings, etc. The amount estimated as necessary for the current expenses of next year is \$72,000, which comprehends a purchase of new farm machinery, wagons and buggies, horses and cows, and drainage of farm. T. J. Charlton is Supt., and is giving excellent satisfaction.

FRIENDS OF EDUCATION.

A circular on education has been issued by the Executive Committee on Education for Indiana Yearly Meeting of Friends, which is of interest not only to Friends, but to all who favor general intelligence and high moral excellence.

The Friends (Quakers) are noted for their high average of intelligence. Years ago, when the public schools were of short duration and poor in quality, the Friends took the lead in supporting private schools of a high order. Efficient public schools have supplanted most of these private schools, and yet this committee finds a work to do. It recommends the holding of stated meetings for the discussion of educational topics, and the organization of neighborhood literary societies; the formation of classes for evening study and recitation; the organization of a cheap lecture course. A "School for Study at Home," on the Chautauqua plan, under the direction of Elijah Coffin, of Richmond, has also been organized.

A letter, with stamp, to Marthanna T. Pearson, secretary, at Richmond, Ind., will secure circulars and full information.

This is certainly a praiseworthy work, worthy of general imitation.

GEMS OF THOUGHT.

Generosity during life is a very different thing from generosity in the hour of death: one proceeds from genuine liberality and benevolence, the other from pride and fear.—*Horace Mann*.

Bad manners are a species of bad morals. A conscientious man will not grossly offend in that way.—*Bovee*.

Good nature is the very air of a good mind, the sign of a large and generous soul, and the peculiar soil in which virtue prospers.—*Goodman*.

AN OLD, OLD QUESTION.

A spirit that from earth had just departed,
 Lingered a moment on its upward way,
 And, looking back, saw, as though broken-hearted,
 Its friends and kindred weeping o'er its clay.
 "It seems they loved me dearly. Had I known it
 My life had been much happier," it said.
 "Why only at our parting have they shown it—
 Their fondest kisses keeping for the dead?"

[MARGARET EYTINGE, in *Harper for January*.

ECONOMY.—Beware of little expense: a small leak will sink a ship. If you know how to spend less than you get, you have found the philosopher's stone.—*Franklin*.

Jails and prisons are the complement of schools; so many less as you have of the latter, so many more you must have of the former.—*Horace Mann*.

Every evil to which we do not succumb is a benefactor. As the Sandwich-Islander believes that the strength and valor of the enemy he kills passes into himself, so we gain the strength of the temptation we resist.—*Emerson*.

For just experience tells, in every soil,
 That those that think must govern those that toil.

[*Goldsmith*.

We can do more good by being good than in any other way.—*Rowland Hill*.

Learn the luxury of doing good.—*Goldsmith*

Man wants but little here below,
 Nor wants that little long.

[*Goldsmith*.

Since trifles make the sum of human things,
 And half our misery from our foibles springs;
 Since life's best gifts consist of peace and ease,
 Since few can save, or serve, but all may please—
 O, let the ungentle spirit learn from hence,
 A small unkindness is a great offense.

Little deeds of kindness,
 Little words of love,
 Make this earth an Eden,
 Like the heaven above.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS FOR NOVEMBER.

WRITING.—1. Describe the construction of the letter *t* by stating how many and what kinds of lines make it up. Same of *l*. 10

2. Name four characteristics of good penmanship, and indicate which of the four you regard as most important. 10

3. Name the small letters in the order in which you would introduce them for analysis. 10

4. Why is it valuable for the pupil to analyze the letters in his copy? 10

5. What is meant by a space in height? 10

6. Write this couplet as a specimen of your writing:—

"'Tis with our judgments as with our watches; none
Go just alike, yet each believes his own." —Pope. 1-50

READING.—"I had a dream which was not all a dream:
The bright sun was extinguished, and the stars
Did wander darkling in the eternal space,
Rayless and pathless, and the icy earth
Swung blind and blackening in the moonless air."

—From *Darkness*.

1. (a) Who was the author of this poem? (b) When and where did he live? (c) Name two other poems he has written.

a, 8; b, 6; c, 6.

2. What inflection of voice should be given at "dream?" (last word in first line.) At "extinguished?" at "space?" at "pathless?" Give reasons. 10

3. Select five words from quoted passage for a lesson in spelling and definition, giving reasons for your selection. 5 pts, 4 each.

4. Why should pupils be required to make a thought analysis of a lesson before being required to read it orally? 20

5. Describe the alphabet method of teaching reading, and state why it is inferior to either the word or phonic method. 20

ORTHOGRAPHY.—1. In what two classes may letters be divided? State the basis of the divisions. 2 pts, 5 each.

2. Syllabicate and mark the accent of *illustrating* and *corporal*. 2 pts, 5 each.

3. Which rule of spelling is violated by spelling *traveler* with two *i*'s? 10

4. Write the words *programme* and *national* phonically, indicating the sound of each letter by the proper mark. 2 pts, 5 each.

5. What sound has *a* in an unaccented syllable when the syllable ends in *a*? 10

6. Spell the following words after the preceding questions have been answered: Legible, metallic, besiege, prohibition, corollary, supercilious, encysted, sacrilegious, prothonotary, miasmatic, separate, sybil, syllable, bureau, mariner, predecessor, abyss, elite, innocence, socialist. 2½ each.

ARITHMETIC.—1. Reduce 172 lbs. troy to pounds avoirdupois.

proc. 6, ans. 4.

2. What will $\frac{3}{4}$ of a ton of coal cost at \$3.75 per ton? By analysis. anal. 5, ans. 5.

3. What principal in 3 yr. 4 mo. 24 da., will amount to \$761.44 at 5 per cent. per annum? proc. 5, ans. 5.

4. For what sum must a note, dated April 5, 1880, for 90 da., be drawn, that when discounted at 7 per cent., April 21, 1880, the proceeds may be \$650? proc. 5, ans. 5.

5. A room is 20 ft. long, 16 ft. wide, and 12 ft. high; what is the distance from one of the lower corners diagonally to the opposite upper corner? proc. 5, ans. 5.

6. St. Petersburg is 30° 2' East Long.; and Indianapolis 86° 10' West Long. When it is 3 A. M. at St. Petersburg, on Wednesday, what is the time at Indianapolis? proc. 5, ans. 5.

7. Reduce 492 dekagrams to quintals. By analysis.

anal. 5, ans. 5.

8. How many bricks, each 8 in. long, 4 in. wide, and 2½ in. thick, will be required for a wall 120 ft. long, 8 ft. high, and 1 ft. 6 in. thick, no allowance being made for mortar? proc. 5, ans. 5.

9. If six men can build a wall 20 ft. long, 6 ft. high, and 4 ft. thick in 16 days, in what time can 24 men build a wall 200 ft. long, 8 ft. high, and 6 ft. thick? By proportion. stat. 3, proc. 3, ans. 4.

10. A man purchased a square farm containing 140 acres and 100 square rods. What was the length of one side of it? proc. 5, ans. 5.

GRAMMAR.—1. Correct: He is the most remarkable man who the present age has produced, and parse the word connecting the two clauses. 2 pts, 5 each.

2. Conjugate the verb *see* in the present, potential, passive. 10

3. Correct the following: indianapolis ind oct 20 1879 dear sir your last letter was duly rec'd no answer is required respectfully john smith. 10

4. What tenses, of what moods can be formed without auxiliaries? 10

5. What are the principal parts of the verbs *make, lay, set, ride, write*? 1 off for each error.

6. Give the corresponding masculine or feminine of the following nouns: *baron, duke, lad, belle, equestrienne.* 5 pts, 2 each.

7. Write an exclamatory sentence, an imperative sentence, an interrogative sentence, and a declarative sentence, using the same predicate verb in each. 4 pts, 2½ in each.

8. Correct and analyze: He is to be married to I don't know who. first part 4, second 6.

9. Correct: *I might have went home earlier,* and give the reason for the change. 2 pts, 5 each.

10. Which of the pronouns indicate by their form the gender of their antecedent nouns? 10

GEOGRAPHY.—1. What is the shape of the earth? Give three proofs of this. 4 pts, 3 off for each error.

2. Define Capital, Capitol, Metropolis, Republic, Monarchy. 5 pts, 2 each.

3. Beginning at the north, name in order the Eastern States that border on the ocean and its arms. 5 pts, 2 each.

4. Name four particulars in which mountains are of importance. 4 pts, 3 off for each error.

5. Going directly south from Glasgow, name, in order, the countries through which you would pass in reaching the Mediterranean Sea. 5 pts, 2 each.

6. What countries constitute the Scandinavian Peninsula? 2 pts, 5 each.

7. Which is the longest line of direction of Indiana? Name the three prominent cities that lie in this line. 4 pts, 3 off for each.

8. What are continental islands? What other class of islands is there? 2 pts, 5 each.

9. In what part of the United States are manufactures chiefly carried on? Why? 2 pts, 5 each.

10. Name five of the articles usually shipped from the North to the South by the Mississippi and its branches. 5 pts, 2 each.

HISTORY.—1. Name the two principal discoveries by Columbus. 2 pts, 5 each.

2. Why are the aborigines of America called Indians? 10

3. How was slavery first introduced into this country? 10

4. Under what circumstances was Texas annexed? 10

5. What advantages have followed from the invention of labor-saving machinery? 10

6. Who was Thomas H. Benton? 10

7. What causes produced the great European immigration to this country? 10

8. What European nations established colonies in this country? 10
9. Name three leaders of the Federal party, 1789. 10
10. What led to the capture of Washington, 1814? 10

NOTE.—Descriptions and narratives not to exceed six lines each.

PHYSIOLOGY.—1. How are the bones of the hand divided, and how many bones in each division? 2 pts, 5 each.

2. Why is it healthier to breathe through the nose than through the mouth? 10

3. What organ secretes the gastric juice? What secretes the saliva? 2 pts, 5 each.

4. What is the distinction between arteries and veins? 10

5. Why are the brain and spinal column so completely protected by a bony covering, the organs of the chest less so, and those in the abdomen still less so? 3 pts, 4 off for each one.

6. What is the cause of the pulse? Why have the veins no pulsations? 2 pts, 5 each.

7. What are the seats and indications of the sensations of hunger and thirst? 4 pts, 3 off for each one.

8. How many pairs of glands constitute the salivary glands? Where is each pair located? 2 pts, 5 each.

9. What changes of food occur in the intestines? 10

10. How many bones in the spinal column, and how are they separated? 2 pts, 5 each.

THEORY AND PRACTICE.—1. State three reasons for prohibiting whispering in school during study hours. 25

2. What is the purpose which the teacher should have in view in governing a school? 25

3. Define a habit. 25

4. Name the different purposes of the recitation. 25

ANSWERS TO STATE BOARD QUESTIONS FOR DECEMBER.

ARITHMETIC.

1. $53 \overline{) 1272}$ 125 by cancellation= $125 \times 24 = 3000$. Ans. 3000 bus.
2. $\frac{180 \times 14 \times 14 \times 14 \times 14}{14 \times 14 \times 14 \times 14 \times 14}$ by cancellation= 288 .
3. a. As the carriage cost $\frac{1}{3}$ of the whole sum, and the horsos cost $\frac{1}{3}$ of the remainder, they cost $\frac{1}{3}$ of $\frac{2}{3}$ or $\frac{2}{9}$.
b. As the carriage and horses cost $\frac{1}{3} + \frac{2}{9}$, they cost $\frac{5}{9}$ of the whole.
c. As the carriage, horses, and harness cost the whole sum, and the carriage and horses cost $\frac{5}{9}$, the harness cost $\frac{4}{9}$.
d. As the cost of the harness, $\frac{4}{9}$, was \$150, the cost of the whole was $\frac{9}{4}$ of \$150, or \$2,000. Ans.

4. 410.

3100.031

2100 021

.05151

5610.10351 Ans.

5. a. 42 g. 0 q. 1 pt.

41 2

44 1 0 1 gill

39 0 0 3 "

167

b. 167 g. at 5.25 fr. per gal. = 876.75 fr. Ans.

6. a. 1 joist = 5 m. $\times 275 = 1.375$ s. m.b. 2 joists = 1.375 s. m $\times 2 = 2.75$ s. m.7. $9.25 : 7.5 :: 148 : 120$.

8. a. \$1,200 at 6 % will produce \$72 in a year.

b. \$1,500 at 9 % will produce \$135 in a year.

c. As the two sums together will produce \$207 in a year, it will require $\frac{11}{13}$ of a year for them to produce \$310.50, or $1\frac{1}{3}$ years.a. $\sqrt{\frac{1}{16}} = \sqrt{\frac{1}{4}} = \frac{1}{2}$.b. $(\frac{1}{16})^{\frac{1}{4}} = \sqrt{\frac{1}{16}} = \frac{1}{4}$.c. $\frac{1}{2} - \frac{1}{4} + 2 = \frac{5}{4}$. Ans.

10. a. As the tail is 8 inches plus the half of the body, the head and tail together, being as long as the body, must be 16 inches plus the half of the body, and body being as long as one-half of itself and 16 inches more, must be twice 16 or 32 inches long.

b. As the tail is as long as the head and half the body, it must be 8 inches plus 16 inches, or 24 inches long.

c. The whole fish will then be 8 inches, the head; plus 32 inches, the body; plus 24 inches, the tail; or 64 inches in length.

READING.—1-2. To learn to read, a child must learn the twenty-six letters of the alphabet by name; he must be able to recognize their twenty-six arbitrary forms, to give their more than forty *very* arbitrary elementary sounds, and to associate these sounds in an unlimited number of ways in the formation of words. To the young and untrained mind this is no light task, and in whatever way the teacher may undertake to assist him in the accomplishment of it, many difficulties must be met and patiently overcome. There are several plans or modes of teaching reading, depending upon where

one begins. If a beginning is made with the names and forms, as was altogether the case in the writer's childhood, we have the "A, B, C, method"; if a beginning is made with the association of their sounds as combined in words, we have the "word method"; if a beginning is made with the pronunciation of the elementary sounds, either separately or in combination, we have the "phonic method." The first method is synthetic; the second, analytic; the third, synthetic or analytic, or the two combined, according to its use. Since the accomplishment of the whole task necessarily includes everything specially aimed at in each of these processes, it would seem the part of wisdom not to use any one of them exclusively, but to make such a judicious combination as will meet the special needs of the class or of the individual pupil.

Of course the various methods must be, like the famous artist's paints, "mixed with brains"; for no discreet teacher will use them indiscriminately, as some people do patent medicines, expecting with some stray dose to cure the ailing part. If a teacher succeeds best with the phonic method on the whole, it is well for him to base his instruction upon it, but not to make a hobby of it or to force every child-mind to get its knowledge in that way. From the ends in view, it is well to have a *natural method* that will associate all, dwelling more particularly upon one or another as the peculiarity of the child's mind may need. No teacher can succeed fully who fails to note (a) The condition of the pupil's mind; (b) The character of the knowledge to be imparted; (c) How much and how to apply the material so as to produce a healthy growth and development.

In teaching the phonic method, one may commence with the simple sounds of vowels and consonants, combine these at first in short forms till the pronunciation and enunciation of the pupil are accurate, then into longer forms, into more complex forms, and into forms into which are gradually introduced the more difficult sounds.

It is well at this point to make the words constructed *living* by using them as representatives of ideas, and also to make the pupil more thoroughly acquainted with them as wholes by pronouncing them rapidly at sight.

3. Ability to call the words at sight, the association of the idea with the form representing it, and knowledge of the thought in the author's mind, are necessary to enable a pupil to read a sentence or paragraph intelligently.

4. In order that the pupil may catch the author's thought, the teacher must require quality rather than quantity at the reading lesson, must himself study carefully that which the pupils are to recite in order that a lesson from him may precede the recitation by the pupil, and in this lesson he must, by illustration, by suggestion, by information, partly given and partly withheld, awaken in the pupil's

mind an interest in that which is to be read and a desire to know more fully of the thoughts to be expressed. It is the writer's experience that it can not be expected of pupils, even in the grammar grades, to read so simple a thing as a narrative or a description without previous suggestions and outlinings by the teacher. Of course there are abundant sources of information in biography, in history, in geography (embracing physical features), in literature, and in science, so that much incidental knowledge may be gained in this way.

5. (a) The body is more at ease; (b) The vocal organs can be brought into a natural position for distinct articulation more readily.

GRAMMAR.—1. A personal pronoun is a substitute for the noun which is its antecedent, and shows its person and number; the relative pronoun likewise represents its antecedent, but does not indicate its person and number, while it serves to connect a dependent clause to a noun.

6. Subject, *He*; predicate, heard. Subject unmodified; predicate modified by its object *neighing*. *Neighing* is modified by the article *the*, the adjective phrase, *of the horses*, and the adverbial phrase, *before the coming of the storm*. In the first phrase *of* is the preposition and *horses* the object, modified by the article *the*. In the second phrase *before* is the preposition, and *coming* the object, modified by *the* and *of the storm*, in which *of* is the preposition, *storm* the object, and *the* the modifier.

7. *There* is an expletive; *little doubt as to which party must be the loser in undertaking it*, is the subject; *is* is the predicate. *Doubt* is modified by the adjective *little* and by the adjective phrase *as to . . . it*. *As to* is the preposition, and *which . . . it* is the object. In the object clause *party* is the subject, *must be loser* is the predicate. *Party* is modified by the adjective *which*, *must be* is the copula and *loser* the attribute. *Loser* is modified by the article *the* and the adjective phrase *in undertaking it*. *In* is the preposition, *undertaking* the object, modified by its object *it*.

10. Who has forgotten those queer contrivances of conjunctions that connected and did not connect; and what a god-send the interjection *was* with its *oh*, *ah*, and *alas*? Often had we employed it; we understood, felt, appreciated it.

HISTORY.—1. A good knowledge of the physical features of a country is necessary to a clear understanding of the influences brought to bear upon the social and political condition of the inhabitants, and furnishes a basis for the study of the causes of events and their results.

2. Stamp Act and Boston Port Bill.

3. In July, 1778, a large force of Tories and Indians, under command of Col. John Butler, aided by the Iroquois chief, Joseph Brant, made a descent upon the valley of the Wyoming. Pa., spread terror and desolation in every direction; and massacred several hundred of the defenceless settlers.

4. To form the United Colonies into free and independent states, and to dissolve all connection with Great Britain.

5. By the terms of the treaty, Great Britain acknowledged the Independence of the United States, and the boundaries were fixed at the Great Lakes on the north and the Mississippi on the west.

6. The difficulties were settled by the purchase of Louisiana territory from France, for \$15,000,000, whereby the United States acquired over one million square miles of land and the full possession of the Mississippi.

7. Telegraph, telephone, steamboat, sewing machine, and self-binding reapers.

8. Nullification in South Carolina, 1832. John Brown's Raid, 1859.

9. It began at Atlanta and ended at Savannah.

10. Nathaniel Hawthorne, Harriet Beecher Stowe, W. D. Howells, James Fennimore Cooper, J. G. Holland. * * *

GEOGRAPHY.—1. Legislative, Judicial, and Executive.

2. Hudson river flows into the Bay of New York. The Susquehanna and Potomac flow into Chesapeake Bay.

3. The Potomac. Its source is in the Alleghany Mountains; flows into Chesapeake Bay; receives the Shenandoah. Oswego river is the outlet of Oneida Lake.

4. Sucre is the capital of Bolivia; Quito, of Ecuador; Brussels, of Belgium; Lisbon, of Portugal; Rome, of Italy.

5. The names and location of the five largest cities in Indiana are as follows: Indianapolis, on a branch of the White river; Evansville, on the Ohio; Fort Wayne, on the Maumee; Terre Haute, on the Wabash; New Albany, on the Ohio.

6. The Rio de la Plata is formed by the confluence of Uruguay and Parana.

7. Oceanic Currents are great streams which flow in certain directions in the sea. The best known of these currents is the Gulf Stream. After passing through the Strait of Florida, it follows the coast of the United States as far as Cape Hatteras, the Atlantic to Scotland and Norway, and, passing around North Cape, terminates in the Arctic Ocean.

8. Waves, tides, and currents. Tides are rising and falling of the sea, which occur at regular intervals. The rising is called the flood tide; the falling the ebb tide.

9. Winds are caused by the unequal temperature of the atmosphere in different parts of the globe. Air expands when heated, and contracts when cooled. When expanded, it rises. The surrounding cold air then rushes in to supply its place, thus producing winds.

10. Hudson Bay is in the northeastern part of North America. Greenland lies east of Davis Strait and Baffin Bay. Vancouver Island is on the Pacific coast, west of British Columbia. Green Bay is in the north of Michigan, and is a branch of Lake Michigan. Saginaw Bay is in the eastern part of Michigan, and is a branch of Lake Huron.

PENMANSHIP.—1. The letters *t* and *d* extend two spaces above the base line; *p* and *g* extend two spaces below the base line.

2. C, G, H, I, J, K, L, M, N, Q, S, U, V, W, X, Y, Z.

3. The shade in the letter *p* should begin at the base line and gradually increase to the end of the stroke. In *d* and *t* the heaviest shade should be at the top of the last downward stroke.

4. *Analysis*.—The parts of the letter *p* are right curve, slanting straight line, and third principle. The parts of *t* are Element III, right curve, first principle and the crossing line. The parts of *e* are Elements III, IV, II, and III. The parts of *f* are the fifth principle and a loop, formed by continuing two spaces below the base line, folding it up in front, drawing it in to the base line, and finishing it with Element III. The parts of *g* are Element IV, fourth principle and Elements I, II, and IV.

5. After the distribution of copy-books, etc., to save time, observe the following order of opening and closing: *Opening*—1, Position; 2, Open Books; 3, Open Inkstands; 4, Take Pens. *Closing*—1, Wipe Pens; 2, Pass Pens; 3, Close Ink; 4, Close Books; 5, Pass Books.

MISCELLANY.

RENSSELAER.—Work on the new school building is suspended till spring. November enrollment, 310; per cent. of attendance, 95. C. P. Mitchell is Supt.

PALESTINE.—The school house here was greatly damaged by fire, December 7th. The school will be carried on in rented rooms till the house is repaired.

RIPLEY COUNTY.—The Ripley county teachers will hold their first annual reunion at Versailles, January 1st and 2d. The programme is a good one, and an excellent time may be confidently expected. Thos. Bagot is Supt.

LEBANON.—The report of the schools for 1881-2 shows them well organized, well graded, well disciplined, well taught, well supervised. Temple H. Dunn is at the helm.

STATE ASSOCIATIONS.—The following States will hold their annual educational meetings Holiday week: Massachusetts, Michigan, Minnesota, Iowa, Illinois, Kansas, Wisconsin, Indiana.

CARROLL COUNTY.—The teachers of Carroll county had a social re-union at Delphi on December 22 and 23, and were addressed by several speakers, among them being Prof. E. E. Smith, of Purdue University.

CONNERSVILLE.—The schools are moving along without friction, with a larger enrollment than ever before. The senior class of the high school numbers 15. Twelve teachers, besides Supt. J. L. Rippeoe, constitute the corps of teachers.

ADAMS COUNTY.—Supt. Luckey has prepared a new course of study for his county and graded schools, and has also outlined his township institute work. The township institutes are largely attended and the schools are growing in interest and efficiency.

PARKE COUNTY.—The teachers of this county held their second annual meeting at Rockville, December 1 and 2. The programme was an excellent one, and the meeting was certainly profitable. County Supt. W. H. Elson seems to be doing good work.

"TO EXTRACT INK from cotton, silk, and woollen goods, saturate the spot with spirits of turpentine, and let it remain several hours; then rub it between the hands. The ink will crumble without injury to color or texture of the fabric. For linen, dip the spotted part in pure tallow, melted; then wash out the tallow, and the ink will disappear."

WELLS COUNTY.—The manual of the Wells county schools for 1882-3, besides course of study, etc., gives practical suggestions and directions in regard to teaching the various branches, and also in regard to graduation from the common schools. An unusually full programme and outline of work for township institutes is also published. Wm. H. Ernst is county superintendent

James Vick, of Rochester, N. Y., the noted Florist, offers to send "a collection of twelve varieties of seeds of the most desirable, showy and free blooming annuals to each of five schools of each county in every state;" *Provided*, that they be cultivated on the school grounds, and that by Nov. 1, next, a written report of the summer's work shall be sent to Mr. Vick. Who wishes to accept this generous offer? The *first five* applicants get the seeds.

WAYNE COUNTY.—Supt. J. C. Macpherson has fallen upon the plan of issuing printed sheets or large circulars, and sending them to each patron of the school through the teachers and children. His first gave the history and purpose of "supervision of district schools." His second gives the purpose and advantages of the course of study, and invites co-operation. That these publications will accomplish great good is morally certain.

LA FAYETTE.—The board of trustees of Purdue University are talking of enlarging the building of the Mechanical Department, which has proved a decided success under the efficient direction of Prof. W. F. M. Goss.

The public library of the city of La Fayette is now in full operation. It is under the management of the school board, superintended by two lady librarians, whose work is quite satisfactory to the patrons.

PURDUE UNIVERSITY.—The forthcoming report of President White will show that the whole number of students last year was 238; the number of students in the present senior class 16; the present faculty includes 13 professors and instructors, and two assistants employed a part of the time. The property, with all improvements, is valued at \$308,657, \$230,000 of which was bequests. The endowment from the United States amounts to \$340,000. The institution is therefore worth more than \$648,000. There is entire harmony among board, faculty, and students.

DELAWARE COUNTY.—The County Board of Education met Dec. 4th, and spent the day in discussing various practical questions connected with the schools, such as "How to increase our Enrollment," "Benefit and amount of Trustees' Visits," "How to keep up the Attendance," "The keeping of Records and Reports," "Do our Teachers use Reference Books and School Apparatus properly?" "Improvement of the School House and Grounds." The discussion of the last named topic resulted in the adoption of the following resolution, which is commended to trustees and teachers generally:

Resolved, That the Delaware County Board of Education urge, where practicable, the setting out of shade trees for comfort and ornament, in each school district of the several townships of Delaware county.

The board also resolved that in consideration of the excellent work being done in the schools, the regular teachers' institute, to be held the Holiday week, "be changed from the five days' session to one day's session, and that said day be Thursday." Also, "that to all who are present the full session, and not tardy, a credit of five days' session will be given." A. W. Clancy is Supt.

THE DOME OF NOTRE DAME.—Notre Dame College, near South Bend, was burned a few years ago, and in the rebuilding, the dome, for the lack of money, was left unfinished. Work has, however, been re-commenced upon it, and when finished it will be the grandest piece of architecture in the state. When completed it will be 200 feet high, and the statue surmounting it will be illuminated at night by an ellipse of electric jets. The interior will be painted in the highest style of art, of which he is master, by Prof. Gregori. The arch of the cupola will be adorned with 36 allegorical paintings representing the arts and sciences, among others, philosophy, astronomy, law, physics, theology, agriculture, music, poetry, the mechanic arts, etc.

The dome was designed in 1879, by Mr. W. J. Edbrooke, of Chicago, in his plan of the college buildings. It is to be a strong and massive structure of iron, gilt on the outside, similar to that of the Hotel des Invalides of Paris. It will cost from \$25,000 to \$30,000. The foundations were laid deep and strong, when the new college building was erected, and the massive structure of brick on which the dome is to rest was raised to a height of 75 feet.

FRANKFORT.—R. G. Boone makes his semi-monthly teachers' meetings something more than formal discussions of routine work; he makes them the occasions of study, not only of methods, but also the philosophy of methods. The meeting held December 13th, (evening) will illustrate:

SUBJECT—"THE PHILOSOPHY OF ILLUSTRATION."

1. Give literal meaning of "Illustration."
2. Give technical meaning of "Illustration."
3. Give literal and technical meaning of philosophy.
4. Compare the two terms "Philosophy of History" and "Philosophy of Illustration" as to content.
5. Name the purposes of illustration in Education.
6. Classify the purposes named.
7. What are the sources of the elements of educational illustrations?
8. Classify these materials of illustration as to concreteness.
9. What determines the time at which to use illustrations?
10. What conditions the frequency of illustration?
11. What relation does the illustration bear to the point illustrated?
12. How may skill in gathering and giving illustrations be acquired?

PREMIUMS.

To any one who will send us *five* new subscriptions at \$1.25 each, we will send, post-paid, either of the following works:

Shakespeare, complete; Virgil, translated; The Koran (Mohammedan Bible); Don Quixote; Arabian Knights; Robinson Crusoe;

Swiss Family Robinson ; Pilgrim's Progress ; The Complete Poetical Works of either Milton, Byron, Burns, Dante, or Mrs. Hemans ; Scott's Lives of the Great Novelists and Dramatists ; Johnson's Lives of the Great Poets ; Home Amusements ; Dictionary of Daily Blunders ; Handy Book of Synonyms ; Handy Classical Dictionary ; History of the Free Trade Movement in England ; Boswell & Johnson—their Companions and Contemporaries ; The Huguenots ; The Russian Empire ; American Humorists.

To any one sending *ten* subscriptions at \$1.25 each, we will send post-paid, any two of the above list, or any one of the following :

Shakespeare, complete ; Taine's History of English Literature ; Dictionary of the Bible ; The Manliness of Christ ; Green's Large History of the English People ; Life of Napoleon Bonaparte ; Dickens' Child's History of England ; The Last Days of Pompeii ; Tom Brown's School Days at Rugby ; Children's Bible Stories ; Life of W. Wilberforce ; Life of Dr. Chalmers ; Oscar Browning's Educational Theories ; Hopkins' Comic History of the U S. ; Caulkin's Primary Object Teaching ; Carlyle's French Revolution.

An enterprising teacher can easily work up a club in his township and thus secure for himself some good reading matter. The books are all neatly bound in cloth.

CLUBBING RATES WITH THE MAGAZINES.

Every teacher reads, or ought to read, some good literary magazine. To encourage such reading, and to give the patrons of the Journal the advantage of the lowest prices, we make the following club rates :

	Regular Price.	With the Journal.
Harper's Monthly.....	\$4 00	\$4 50
Harper's Bazar.....	4 00	4 60
Harper's Weekly.....	4 00	4 60
Harper's Young People (weekly).....	1 50	2 60
Century Magazine.....	4 00	4 85
St. Nicholas.....	3 00	3 85
North American Review.....	5 00	5 25
Atlantic Monthly.....	4 00	4 60
Wide-Awake.....	2 50	3 35
Babyland (monthly).....	50	1 65
Our Little Men and Women.....	1 00	2 00
Our Little Ones.....	1 50	2 40
Education (bi-monthly).....	4 00	4 40
New England Journal of Education (weekly).....	3 00	3 50

A teacher can take two or more of these magazines at club rates. The regular price of the Journal is \$1.50.

P E R S O N A L .

Jasper A. Jones is principal at Walkerton.

F. P. Green has charge of the Amboy Academy.

D. H. Olive has charge of the Whitestown schools.

A. E. Rowell has charge of the schools at New Carlisle.

R. H. Harney is principal of the Lebanon high school.

Samuel Resser is principal of the schools at Silver Lake.

J. L. Rippetoe is serving his fourteenth year as superintendent of the Connersville schools.

Geo. Sands, last year of the State Normal school, has organized a graded school at Rossville.

A. E. Davison, a graduate of the State Normal, class of '82, is principal of the Rochester high school.

James Du Shane is still superintendent at South Bend, and Chas. H. Bartlett is principal of the high school.

J. T. Scovill, late Professor in the State Normal, is in the abstract business in Terre Haute, and doing well.

F. O. Burdick, formerly a teacher in this state, is now superintendent of Dane county, Wis. His address is Utica.

W. T. Gooden, for a long time an assistant in the Paoli Normal, has been chosen principal *vice* E. F. Sutherland, resigned.

Prof. C. R. Barnes, of Purdue University, takes unto himself a better-half during the Holidays. His friends think it a just re-Ward.

W. H. Wiley, Supt. of the Terre Haute schools, has been over-working himself again. He never has, but always is to have, a rest.

W. H. Fertich is keeping the Mishwaka schools in the straight and narrow way. He has eleven assistants, with Geo. A. Powels at the head.

E. F. Sutherland has resigned the principalship of the Southern Indiana Normal School, at Paoli. He is an energetic worker in the state, and is now open for employment.

John W. Caldwell has resigned his position in Moore's Hill College, and is again in the school apparatus business, with headquarters at Sheldon, Ill. Cause why? Better pay.

Hiram Hadley, late of the Hadley-Roberts Academy, Indianapolis, is now devoting most of his time to the publication and sale of Eckardt's Anatomical and Physiological Charts.

Geo. P. Brown, Pres. of the State Normal School, has been on the sick list for some time past; he is now on the upward grade again. Too much work. Too much work. Too much work.

Temple H. Dunn, Supt. of the Lebanon schools, has been elected superintendent of the Crawfordsville schools, in place of W. T. Fry, resigned. Mr. Dunn is one of the growing superintendents of Indiana, and the promotion is deserved.

G. W. A. Luckey, Supt. of Adams county, was married December 26, and took in the State Association on his wedding trip. Miss Bertha Musson, of the Danville, Ill., high school, is the "Lucky" lady. The Journal extends hearty congratulations.

John Goodison, for many years the Michigan agent for D. Appleton, and well and favorably known to many northern Indiana teachers, has changed his allegiance, and is now travelling for the school and stationery house of Thorndike Nourse, of Detroit, Mich.

A. M. Gow, formerly one of the leading educators of this state, is still editing a paper in his old home, Washington, Penn. He has not lost his interest in educational matters, and his name appears in the records of the proceedings of most of the teachers' meetings of his county and state.

Mrs. Emma A. Green, formerly a teacher in the Indianapolis high school, was recently married to Mr. W. E. Spooner, of Whitewater, Wis. Mrs. Green is a lady of much more than ordinary culture and refinement, and she was eminently successful as a teacher. Her many friends wish her a long and happy life.

H. S. McRae was re-appointed Supt. of the Muncie schools Oct. 9th, and now gives his entire time to his old work. After the protracted unfortunate school fight matters seem to have quieted down, and every department of the school work seems to be doing well. The high school is perhaps the largest in the state in proportion to the size of the place.

Mrs. Ora Adams, at the death of her husband, came into possession of the property known as the Central Normal College, at Danville, and she also assumes the duties as president. J. A. Steele will remain vice-president, and continue in charge of the business management. No changes whatever will be made in the present corps of instructors.

Mary H. Krout, who has been for many years a successful teacher in the Crawfordsville schools, but who has taught since the beginning of the present school year in the Indianapolis schools, has resigned her place to take a position on the *Crawfordsville Journal*.

Miss Krout has written a great deal for papers and magazines, and she already has quite a literary reputation. The Journal wishes her abundant success in her new work.

OBITUARY.

Frank P. Adams, principal of the Indiana Central Normal School at Danville, died November 25, 1882, at the age of 30 years. He was a Kentuckian by Birth. He graduated at the Lebanon, Ohio, Normal School in 1871, and from the classical course at Medina, O., in 1875. In 1877 he became one of the instructors of the Ladoga Normal, and when the school was established at Danville went there, 1878. For the past four years he has had charge of the school, and has made it prosperous from the time he took it, the attendance now being about 400. An internal tumor, from which he suffered several months, was the cause of his death.

He was not only an active, enterprising, thorough-going teacher, but he was a courteous, christian gentleman.

He had endeared himself not only to his students, but to the citizens of Danville, and his loss was regarded a public calamity. The memorial services were participated in by students and citizens, and could hardly have done him more honor.

"If there's another world he lives in bliss;
If there is none, he made the best of this."

POPULAR SCIENCE.

This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

THE HARDEST METAL.—Iridium is found in the form of heavy black grains resembling fine gunpowder, and is heated in a sand crucible. When a high temperature is attained, to the metal is added one-fourth its weight of phosphorus. The phosphorus quickly melts, the iridium as speedily fuses, and may be poured into heated metal moulds. As soon as the metal sets it is placed in another crucible with chalk or with lime, returned to the furnace and again subjected to a high heat. The metal defies the file and all acids, can not be hammered while hot, and is only moulded into convenient forms and then sawed by copper disks treated with water and emery.

THE LONGEST GOLD BAR.—We saw this week, at the Bank of California, says the *Mining and Scientific Press*, the largest gold bar ever cast in the United States. It was shipped to the bank by the North Bloomfield (hydraulic) Mining Company, of Smartsville, Nevada

county, Cal. The value of the bar is \$114,000, and weighs 511½ pounds Troy. Its length is 15 inches, width 6 inches, and depth 7 inches. It contains 630 cubic inches of gold, and is worth about \$19 per ounce.

THE LONGEST TALK YET.—President W. H. Strong, of the Atchison, Topeka & Santa Fe Railway, talked by telephone from Boston with C. C. Wheeler, general manager of the company at Guaymus, on the Gulf of California, a distance of about 3,500 miles, said to be the longest land circuit on record.

NOT AN ATHEIST.—Haeckel's monistic views, as he states them in a recent address, appear to be nearly identical with the agnosticism of Herbert Spencer—"that purest monistic form of faith," says Haeckel, "which attains its climax in the conviction of the *unity of God and nature*." The further advances we make in the knowledge of nature—"the more we approach that unattainable, ultimate ground—the purer will be our idea of God."

THE ACCURACY OF SCIENCE.—In the present state of science the most universal standard of length we could assume would be the wave length in vacuum of a particular kind of light emitted by some rudely diffused substance, such as sodium, which has well defined lines in its spectrum. Such a standard would be independent of any changes in the dimensions of the earth, and should be adopted by those who expect their writings to be more permanent than that body. Vol. I., page 3. Electricity and Magnetism.—*James Clark Maxwell*.

The metric system has a single basis, is decimal, and is practically international. To learn the metric system one must be absolutely familiar with the gram, liter, and meter, as representative of weight, capacity, and length. The five cent nickle piece is 2 centimeters in diameter, and weighs 5 grams. In A. P. Gage's (Boston) Elements of Physics, only the metric system is used.

A former student of W. W. Grant (prin. high school, Indianapolis) writes him from Princeton that President McCosh took great interest in the transit of Venus, and repeatedly asked a Kentucky student if he saw any *bluegrass* on the surface of Venus.

The great success, both technically and commercially, of the Suez Canal, has stimulated M. de Lesseps to undertake a similar work of even more gigantic proportions, namely, the piercing of the Isthmus of Panama by a ship-canal, forty miles long, fifty yards wide on the surface, and twenty yards at the bottom, upon a dead level from sea to sea. The estimated cost of this work is £20,000,000, and, more than this sum having been subscribed, it appears unlikely that polit-

ical or climatic difficulties will stop M. de Lesseps in its speedy accomplishment, Through it, China, Japan, and the whole of the Pacific Ocean will be brought to half their present distance, as measured by the length of voyage, and an impulse to navigation and to progress will thus be given which it will be difficult to overestimate. —*Dec. Pop. Science.*

BOOK TABLE.

Vick's Magazine is indispensable to any progressive florist or horticulturist. It is published at Rochester, N. Y. The December No. is "a thing of beauty."

The Atlantic for January contains articles from Longfellow, Hawthorne, Whittier, Holmes, and Warner. This is one of the most brilliant numbers of this magazine ever issued.

The Phonetic Teacher, edited and published by T. R. Vickroy, of St. Louis, is the official organ of spelling reform. It is inexpensive, and should be in the hands of all persons interested in the work. Send for copies of the paper.

The Wide-Awake is one of the magazines for young people that one can recommend with a clear conscience. The subscriber will only be disappointed in getting more than he anticipated. Published by D. Lothrop & Co., Boston, Mass.

The Normal Mirror is the name of a new paper published at Danville, Ill., by Alex. C. Hopkins, who is well known to many teachers in this state. The paper is a quarterly, price 30 cts., and is devoted to the interests of East Illinois College.

Harpers' Young People is a weekly paper for boys and girls, profusely illustrated, and filled with appropriate reading matter. Price \$1.50. The bound volume for the year just closed makes a magnificent holiday present for either boy or girl.

The Journal of Speculative Philosophy, Edited by Wm. T. Harris, of Concord, Mass., is what its name indicates. Any one who knows Mr. Harris will know without being told, that anything he edits will be thorough and exhaustive. Any one interested in *deep thought* will find this a valuable visitor.

Spanish Grammar. By William I. Knapp, Ph. D., Professor of Modern Languages, Yale College. Boston: Ginn & Heath.

The author of this Castilian Grammar is authority in the present use of the Spanish language as spoken in the capital of Spain, having resided in that city many years.

The book is adapted for students who are already acquainted with such rules of agreement as are common to language in general. In its first section it treats of pronunciation. The second section gives directly the forms of articles, nouns, and adjectives, with conjugations of verbs. By this direct introduction to the language itself, the learner is soon able to read with ease. The third section gives the rules of syntax in full, together with exercises in translation from English into Spanish.

The N. W. Missouri School Journal has just reached us. It is a new paper, in pamphlet form, and Vol. I, No. 3, looks well and reads well. It contains a unique article on "The Use of Small Words," by Allen Moore, who is well and favorably known to many readers of the Journal. The article is composed of words of one syllable. It is published at Stanberry, the seat of the Stanberry Normal School.

Test Problems in Algebra. By H. B. Furness, G. W. Smith, and J. H. Bromwell, teachers in the Cincinnati high schools. Cincinnati: Van Antwerp, Bragg & Co.

With practical teachers it is not necessary to argue the necessity of test examples, in both arithmetic and algebra. The want in arithmetic was supplied years ago; and now comes this help in algebra. Every good teacher supplies "test examples," and such a book saves the teachers. The examples in this little volume are what they purport to be; they are well graded, and will be hailed with delight by every teacher of algebra. It is especially adapted to the arrangement of Ray's Algebras, but can be used in connection with any book.

New Games for Parlor or Lawn, with a Few Old Friends in a New Dress. By Geo. B. Bartlett. New York: Harper & Bros.

This little book, containing about 225 pages, contains nearly 100 games, most of them for in-door use, all of them interesting, and many of them instructive.

One of the sins that many parents will have to account for is that they wholly neglect to provide their children with innocent amusements. Thousands of boys are driven to the streets and to "the bad," because they can have no "fun" at home. Parents should recognize the fact that children have social, as well as intellectual and moral natures. When this truth is appreciated such books as the above will be in demand.

The Boy Travellers in Egypt and the Holy Land. By Thos. W. Knox. New York: Harper & Bros. pp. 438, Price by mail, \$3.

Mr. Knox is the author of "The Young Nimrods," "Overland Through Asia," "Underground," "How to Travel," and other cap-

ital books for boys. He has twice visited Egypt and made the tour of Palestine and Syria, and therefore speaks from personal observation and experience. To adapt the narrative to the comprehension and add interest to it he represents two boys travelling from place to place, and has them describe what they see, ask and answer questions, tell anecdotes of the costumes of the people, etc., etc. In this manner a vast deal of valuable information is given concerning the geography, history, people, and institutions of these countries.

The book is extensively illustrated, printed in large type on excellent paper, and is beautifully bound. It is a treasure for any boy—or girl either.

The English Sentence, a Treatise on Grammar and Analysis, with Diagrams. By W. F. L. Sanders. Published by the author. Price, \$1.25.

This book contains only 270 pages, but the pages are very large, the paper very heavy, and the diagrams very numerous and in very large type, so that the book is much larger than any other school grammar published.

The work itself has certainly many points of merit. 1. It is well graded. 2. Each new step presents the learner with but one or two new points to learn. 3. Each point is fully illustrated. 4. The system of analysis is unique and simple. 5. No other book gives so many examples of analyzed sentences.

The author claims that sentences containing every possible peculiarity of structure are given. He is an Indiana man, and has done credit to himself and the state in this book. Address him at New Albany, where he is teaching.

The Modern School Readers. By H. I. Gourley and J. N. Hunt. Pittsburgh, Penn.: H. I. Gourley.

This is a four-book series, a good point to begin with. The First Reader embodies the latest and most important methods of primary instruction. The illustrations are beautiful and pertinent, the gradation is natural and easy, the new words are placed at the head of the lesson, script exercises are judiciously introduced, thorough reviews are made, employing all new words, the topics are such as children will comprehend.

The same general plan in gradation, subject-matter, illustrations, reviews, language work, etc., is carried through the other Readers. The suggestions to teachers are pointed and will be helpful. The selections in the higher Readers are excellent and well suited to the grades for which they are intended.

That these Readers will compare favorably with the best in the country, there is no question. They will certainly command their

full share of patronage. The paper, type, illustrations, and binding are beyond criticism.

BUSINESS NOTICES.

If you wish to raise a club for the Journal, write for terms to agents.

Especial attention is called to the new advertisements this month. Advertisements are the means by which teachers can keep themselves posted as to the latest books, apparatus, etc.

THEO. PFAFFLIN is one of the leading Musical Instrument Dealers in the state, and his word can be relied upon when he recommends an article. Teachers will do well to correspond with him if they need anything in his line, and when they visit the city to visit his large sales rooms, 58 and 60 N. Pennsylvania street, Indianapolis. See advertisement on another page.

WANTED.—Township Trustees to correspond with us directly with regard to supplying their Schools with The People's Cyclopaedia.

11-17

J. M. OLCOTT.

GRADED MONTHLY SUPPLEMENTARY READING.—Fresh every Month.—Adapted to any Readers —A New Departure in Teaching Reading. By ingenious devices it trains children to be wide awake when they read. Stimulating and helpful to teachers as well as to pupils. The leaves are very cheap and give the highest satisfaction. For 10 cents we will send ten copies (single issue) of either paper for trial in a 1st, 2d, 3d, or 4th Reader class, as may be designated, or samples of each grade. Save your postal cards. Enclose 10 cents and look for the papers by return mail.

12-4

E. O. VAILE,

Oak Park, Chicago, Ill.

CONSUMPTION CURED.—An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send, free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this journal, W. A. NOYES, 149 Power's Block, Rochester, N. Y.

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INDIANA " SCHOOL JOURNAL.

Vol. XXVIII.

FEBRUARY, 1883.

No. 2.

OUR SCHOOLS AND THEIR NEEDS.

ADDRESS OF H. B. JACOBS,

The Retiring President, at the late State Teachers' Association.

AFTER a few informal words he said: We have come here to our annual convention for the purpose of discussing important questions pertaining to the general interest and welfare of our public schools, to renew our zeal, and catch new inspiration for the work we have undertaken, that we may be better fitted for the responsible duties of educators of youth.

No one will doubt that the design and objects had in view, by those who organized this association, more than a quarter of a century ago, have been fully realized. The leading school men of Indiana at that day (some of whom, we are happy to say, are with us now), were thoroughly imbued with the idea "that the material prosperity of a state depends on the amount of intellectual and moral training of the people." Hence this association was organized for the purpose of presenting new and advanced methods of instruction, and awakening a deeper interest in the cause of public education in this state; and well has it accomplished that purpose. Indeed it has been a central element in the development of our school system. It has done much towards raising the schools of Indiana to the high plane of efficiency which they have reached. The enthusiasm in this

important business, enkindled among those who have attended these meetings, has effected, in a greater or less degree, those teachers who have not attended, so that the influence of this association has been far-reaching, even touching the boundaries of the state in its sweep. It has given impulse that has been most marked to all our educational interests.

While it may seem out of place, in fact it may smack somewhat of the pedantic, to talk in terms of praise of ourselves, it is, nevertheless, a well known fact that the leading school men, outside of this state, who have kept themselves well informed on educational matters in the different sections of the country, willingly accord to Indiana the credit of making more real progress in school work, in the last twenty years, than any other state in the Union. But, however rapid may have been our progress up to the present time, there is yet much, very much to do to perfect our school, that the benefits to the people and the state, may be commensurate with the means and labor we are expending. We have put forth a strong effort and have expended no inconsiderable amount of money to bring our schools up to their present standard of efficiency; and yet, one has but to observe closely for a single day to find abundant proof of the fact, that while we have many good schools, we also have many that are still poor enough, and that *all* may be improved.

What our schools most need now, is better trained teachers, and an abler and more conscientious class of school officers, *especially the latter*. As I have said, this association has done much to advance the educational interests of this state, but, hitherto, most of the time of our meetings has been spent in discussing methods of instruction and subjects to be taught, and in listening to able addresses and papers on "Moral and Mental Training," "The Importance of Higher Education," "The Relation of the Schools to the State," "School Government," and kindred subjects; but we have almost entirely overlooked one important factor in all this work—that is the teacher, the person who is to assume the important and complicate task of the moral and mental training of pupils. We may discuss here freely and fully *what* to teach, and *how* to teach, and present beautiful the-

ories as to the general management of schools, but to get teachers to do good teaching and put our theories into successful practice, is quite a different thing. Instead of discussing longer what to teach, might we not employ some time profitably, discussing what *not* to teach? It does not matter so much how few or what branches are set down in the curriculum, if the teacher be broad and skilled in the art of teaching, the pupils will be kept employed so that they may acquire habits of close application, and they will receive all the instruction necessary to discipline and develop their mental faculties. Ralph Waldo Emerson's remark to his daughter, "I do not care what you may study, I only care to know who is to be your teacher," is full of significance.

Good teaching does not consist in teaching many branches, but rather in teaching a few things well; in presenting a subject in an interesting manner, and in looking at it from many points of view; in leading pupils to see a truth in all its aspects, with its antecedents and consequents.

To be a full teacher one must have more than scholarship and correct intellectual habits; he must have experience, observation, and judgment, and a knowledge of human nature—things not learned from books. He must understand the philosophy of education—the principles that underlie the moral, intellectual, and physical growth of the child. Besides he must have a foundation of common sense, and an acquaintance with the common aims and hopes of the masses. Yet how many there are who attempt to teach school without a tithe of such equipment. How many there are, not only in Indiana, but all over the country, who enter upon the important duties of the office of teacher, just as they would enter upon any piece of mere job-work, to which any one may turn his hand, without previous thought or preparation. Is it to be wondered at, then, that much of the pupils' time in school, in many instances, is spent in a misdirected effort to acquire a knowledge of subjects presented in an illogical and pointless way? Is it to be wondered at, under such circumstances, that much of our teaching, instead of invigorating and expanding the mind actually stupefies it, and

fails to enkindle a desire for higher acquisition? But some one, no doubt, will be ready to affirm that we have in our midst some very successful teachers, who entered upon their work without any special preparation for it. Grant it. But who can estimate the amount of botch work they did, the amount of valuable time lost, and the number of intellects blunted and dwarfed, while they were acquiring their proficiency. Who among us does not look back to days, and months, and even years (precious time to us), passed at school, in an unprofitable, if not absolutely injurious manner, under an incompetent teacher, trying to carry out a barbarous system of instruction.

That the highest results attainable in our public schools may be reached, we need more competent teachers. The possibilities wrapped up in a child are too great, to leave the developing and strengthening of its faculties to chance, or to the inexperienced and superficial in matters of education. The state owes it to herself to see to it, that the unfolding of the minds and moulding of the character of her children be intrusted to skillful hands, and not to the unskillful and thoughtless. The people should realize, in fact we all should realize, and urge it as a truth that can not be gainsaid, that it is infinitely wiser, and much more economical, to be taxed to train teachers for the profession of teaching, than to spend money every few years for text-books.

Some months ago, while on a visit east, I had the pleasure of visiting the Boys' High School of one of our eastern cities. I was impressed with the manly bearing of the pupils and the earnest and enthusiastic manner in which they engaged in their work. Every one seemed inspired with a desire to acquire some new, higher knowledge. Somehow the very atmosphere seemed to impress one with the fact that there was thorough training in that school. In conversation with the broad and cultured principal, he said: "Mr. Jacobs, we do not attempt to teach everything here, but we aim to teach some important things well. We aim to fix firmly in the minds of these pupils some leading truths of the subjects they are studying, and the rest will take care of themselves. We are teaching," he continued, "upon

the gospel of wonder. When we have aroused a spirit of wonder in these boys, and got them interested in their studies, and to wonder at the truths presented; when they get interested in the wonders of the heavens above and the earth beneath, and then wonder at themselves, we think we have made excellent progress in the course of their education, and in preparing them for future usefulness." He said more. "We have been in this building," he remarked, "now seven years. You see the surroundings. I have not seen, in all that time, a scratch or mark of any kind about this school, that would indicate an impure thought on the part of any one of these pupils. I do not speak of this to boast of it. I know what boys are. I only give you the facts." Who can estimate the value to any community of the teacher, who can exercise such moral influence over more than a hundred boys, who come, each year, from all grades of society in one of our large cities. The class drills in that school were indeed intellectual feasts of useful, quickening knowledge, of which the pupils partook with a relish. We felt it was good to be there.

Give us more broad, liberal, and enthusiastic teachers, who know how to teach upon the gospel of wonder; teachers who can invite their pupils to intellectual banquets, and lead them to wonder at the beauties of language, to wonder at the intricate combinations of numbers, to wonder at the heavens above and the earth beneath, and at themselves; teachers who can lead their pupils to push out the boundaries of their thoughts and enlarge their mental capacities, and who can create a thirst for investigation and knowledge.

But I am forced to admit that we can have little hope of securing more competent teachers, until we have a better class of school officers; until our local school management is placed in the hands of men who are able to appreciate the *ability and worth of experienced teachers*, and who can rise above sectarian and party prejudices and influence, and discharge their duties conscientiously, there will be little encouragement for men and women to spend their time and money to fit themselves for the profession of teaching. The term of office is too uncertain.

EDUCATION AND THE COMMONWEALTH.

[Extract from the Annual Address delivered by LEMUEL MOSS, LL. D., President of the State University, before the State Teachers' Association, December 27, 1882.]

WHILE my theme is not new, while I shall say to you nothing that is not old, yet I have in my mind that what I have to say is eminently practical and important. I stand here to-night on my fifty-third birthday. [Applause.] And I recall with feelings of great distinctness and no little emotion the fact that over forty years ago, when one of the poorest of the poor boys in a southeastern county in this state, I read Dr. Lyman Beecher's plea for education in the West. "We must educate, we must educate!" he said, "or we must perish by our own prosperity." The words were imprinted on my boyish heart, and have never been erased. The earnestness of his heart may well find not only a response but a repetition from every one of us.

"The hope of our State and our Nation," said the telegram read a moment ago, "is in our public schools." If so our free public schools must be enforced or our national freedom is doomed. Our public schools must be enlarged, multiplied, and strengthened, if they are the hope of the nation. The commonwealth has duties it has not yet discharged, responsibilities it has not yet realized. I stand here to urge upon the commonwealth this work of education, to ask of every heart its sympathy, of every mind its thought, of every person his entire influence in behalf of this most urgent and necessitous work.

Rapid as have been our advances, lofty as is the position we occupy, great as our self-glory may be, there is a duty, a necessity to-day that we must realize or we are doomed. We shall perish through our material prosperity; we shall perish through our advance in material luxury and wealth; we shall perish through the vice that comes with luxury, unless we make greater advances than we have made, to give intellectual and moral culture. The one great duty of the state is to educate her chil-

dren, to realize the obligation, the necessity, the urgency that is upon it in this regard.

Do you know that in this commonwealth of Indiana there are to-day over 70,000 people that do not know how to read? Do you know that in this state there are nearly twice that number that do not know how to write? That this great city of Indianapolis, in its entire population, does not represent the illiteracy of this commonwealth? Do you know that in this nation of ours more than 13 per cent. of our population do not know how to read? That over two millions of the ten millions of voters can not read the ballots they cast? Do you know that we have passed the point when foreign immigration adds to the illiteracy of our nation, that our illiteracy is greater than that of the foreigners that come to us? The total illiteracy of our nation is 17 per cent. ; that of the foreign illiteracy is represented by 12 per cent.

This means that the balance of power at the ballot-box is in the hands of the illiterate of the land. That in almost every state of this nation, if in some way these people could marshal themselves together, they could carry their measures at the ballot-box. Out of these hordes of illiteracy there can be purchased voters enough to carry the day. Is there not here some food thought? Does it not suggest to us to stop our vain-boasting, our painting ourselves in fairer colors than the hues of the rainbow, and pleading ourselves as a great example, when the hordes of Europe coming to our shores actually reduce the percentage of our illiteracy?

Am I not right in saying that the duty of the commonwealth is to educate her children? If this is the illiteracy of to-day, and the tendencies are as figures indicate, what is to be the condition of things when the children of to day become the men and women of to-morrow, and take charge of the affairs of the nation?

I am told that such a convention as I have ventured to suggest is impossible; that the illiterate will never unite; through their very ignorance they can not unite, to carry any proposition, to advance their interests at the expense of the commonwealth.

I am told that if intelligence will unite, it holds the balance of power in a large majority, and can do as it will; but intelligence does not unite. It is one of the effects of education to produce diversity, to develop individuality, to take men out of classes and parties. But if, as I am told, intelligence will combine against ignorance, there is a magnificent opportunity to prove it. Intelligence has to-day, at this hour, an opportunity to give demonstration to the fact that illiteracy can not stand. Let there be put upon the statute book, that which should be put upon it within the next sixty days, a compulsory educational law. [Applause.] Let the commonwealth say to the ignorant, "You shall not frustrate all the benevolent plans and purposes of the commonwealth." Let the intelligence and culture of the state say, "Freedom does not mean license, corruption, perjury and the selling of one's vote, and the right to wrest from intelligence and industry the result of its labor." Let intelligence say to the hoodlums of the commonwealth, "You shall not govern it!"

I urge upon you, therefore, not to take my word for it, but take this subject, think it over, pray over it, and tell me if the one thing incumbent upon this commonwealth is not the enactment of a law that shall require the children of the commonwealth to receive at least some of the advantages of education and culture.

Many objections may be raised to a compulsory school law, but all the objection that can be advanced here is nothing to the astounding fact that we are face to face with a growing illiteracy that can undermine all our endeavors, and meet intelligence at the ballot-box and divide it.

I urge this great duty upon the state, not only because of her political institutions, but because, of course, it contributes directly to the material wealth of the commonwealth. This perhaps is doubted; it has been denied again and again. All I have to say is that if intelligence does not add to the material wealth of the state, ignorance does, and as we neglect the culture of mind and heart we may expect to grow in wealth until finally, when there is uniformity of capital we shall all be millionaires. [Laughter.]

What is the effect of education? It increases the wants of many. The minimum of need is in the savage tribes. The "noble red man of the forest" is the man of the fewest necessities—and most of them are supplied by his wife. [Laughter.] You can measure the culture of a man or the culture of a community by the multiplicity and degree of its wants. These wants must be supplied, and they stimulate invention and production.

I am told that these inventors are not educated men. I ask for whom do they cater, and out of what kind of communities do they come? Mr. Edson would hardly find a market for his wares among the Hottentots, and the Bushmen of Africa would hardly give rise to such genius as his.

In a community of true, uniform, and high intelligence there may be no great monopoly of wealth, no princely fortunes to be stared at, but there will be a diffusion of wealth and virtue that shall bespeak the solidity and strength of the community, and show that it knows how to make money and knows how to use it.

On the 6th of December there occurred a transit of Venus. I have no doubt my friend Jacobs would get a view of it through his private instrument, but it was a pecuniary loss and an educational shame, that there could, by no possibility be a worthy observation of this phenomenon within the commonwealth of Indiana. I have no doubt the loss of Henry Draper to New York and to the nation, by premature death, was an infinitely greater loss than would be the passing away of W. H. Vanderbilt and his entire system of railroads.

There is power in knowledge; there is wealth in knowledge. And if this commonwealth would advance in wealth, material comfort, and in all that ministers to our advantage, let it make this matter of education its constant thought and enterprise. I urge this duty upon the state because the development of mind and the development of character is the highest and most productive work to which the commonwealth can address itself. What is the state for? What is all this machinery of government for? To develop the resources of the commonwealth. And what are the resources of the commonwealth? The coal, the

iron, the stone, the kaolin, and the fertilizing of the soil—that shall fill all our valleys and hills with growing grain, and cover them with villages. It is the duty of this commonwealth to do what it can to develop these resources. Shall we improve our breed of horses, and do nothing to improve our breed of men? Are the two millions of people within the limits of our commonwealth nothing?

My friend, Professor Campbell, is standing at the door of the Legislature, waiting for it to open that he may ask for an appropriation of six hundred thousand dollars for the purpose of draining the swamps of the Kankakee, that the wealth of the state may be increased by eight or ten millions of dollars. Magnificent proposition! What shall we do to drain the swamps of ignorance, the standing pools of intellectual and moral death, breeding apathy and pestilence? Is there not opportunity for reaching these minds and hearts?

Indiana has her boys and girls, that may be taken in the rough, repulsive, and disinclined as they may be to all education, yet by a gentle compulsion, by an exercise of the attraction of force, we may impel them into a career upon which once entered, they may run with glad delight, and not only infinite advantage to themselves, but infinite advantage and honor to the commonwealth that has fostered and cared for and advanced them.

The best thing that the commonwealth can do with its children is to train, develop, and educate them. Be before-hand in this matter, for the supply must exceed the demand. Give them a right to all the benefits, all the advantages of culture which it is possible for them to receive, from the lowest to the highest. Let the primary, the high school, and the university be theirs freely.

But some one objects to this. "Is it right," says my neighbor, "for you to tax me, in order that your boy may go to college?" "The same right," I reply, "that you have to tax me, in order that your boy may go to the state prison. You have no child that wishes to go to school; I have none that wishes to go to jail; if your boy goes to jail, I have to help support him

and pay his way to get there, and I object. [Laughter.] You take my money to build a prison and a gallows, and to pay the salary of the hangman, and tax me to help build a State House—which has a fine prospect of being adorned with a magnificent mortgage. I never expect to use that State House; there is not the slightest prospect that I shall ever be Governor, or Superintendent of Public Instruction, or a member of the Legislature. I am told, and rightly told, that this is for the advantage and the protection of the commonwealth; and I must pay out of my pocket toward the erection of a jail and the transportation of the prisoner, because it is a protection to the commonwealth of which I am a part.

Shall not you be taxed for the enrichment and adornment of the commonwealth in building school houses, colleges, and universities? Do I defraud any one when I take my salary from the treasury of the state, any more than the warden of the state prison? At least I take it without any reluctance. [Laughter.]

I am met step by step with objections to the proposition I am endeavoring to advance. Step by step the position of the objector must be yielded. I consent to the common school, you must consent to the high school. If the high schools are smitten down, five years will not elapse until the door of every school house in the land will be closed. You grant the high school, you must grant the college. Your superintendent will tell you that our development is not the primary, the intermediate, the high school and the college, but the other way. There would never have been an elementary school if there had not been a demand for it created through the existence of the college. You allow this commonwealth to close the doors of your university, to fail to make provision for the highest culture, and you have doomed your entire system from the top-stone to the foundation. The elementary education can not exist without the higher. The influence of the higher culture is felt in the lowest depths, as the tide of the mighty sea is felt in the minutest rivulets which are its tributaries. The great University of England exerts a magic influence upon the schools throughout the kingdom, and kindles hopes in the heart of the struggling boy that some day he may

go to Oxford or to Cambridge. So when I plead to you for education, I ask for it in its fullest, highest, most glorious sense, because it is one of the great things for the commonwealth to do, to develop its resources, and these are resources of mind and heart. We want the power that can create literature, that can create science, that can create art. We want the commonwealth to stand conspicuous before the eyes of the entire world, not simply on account of its quarries, its walnut trees, its varied forests, but because of its men and women; that it may grow in the general light and heat of a magnificent intelligence and culture. I want the time to come when the poorest boy, struggling in the depths of poverty, with no word of sympathy or encouragement, with no living soul to whom he dare whisper the aspirations of his heart, none but the silent God, to whom he can tell the story of his longings, I want him to feel that this commonwealth shelters him and surrounds him, and that there is a friend that will make free and easy every step to that magnificent crown that lures him on. This is the intimate relation that exists between education and the commonwealth. This is the work that lies before us at this hour.

I do not wish any one to think that in anything I have said I have implied one word of criticism upon the efforts that are being made by our religious denominations, and private endeavors for doing this work of education. I stand before you, pledging myself to be one of the first to rejoice when the Methodist denomination of our state shall make good the proposal of one of our most generous and wealthy citizens. I should be ungrateful if I had aught but praise for the denominations for their endeavors to advance education. But the great commonwealth of Indiana dare not rely upon the private benevolence of her citizens. She dare not receive as the only means by which these ends may be secured, the gift that comes from private or denominational charity. The commonwealth owes it to itself to see that these political perils are averted, that all these means of advancing in wealth through advance in culture, be secured to her people; and to see to it to-day that the minds of her children that must look to her, have all that they can use for the development of

mind and heart, which shall make them not only worthy citizens, but most effective and influential in behalf of the commonwealth. By recognizing the responsibilities of the hour, there will be diffused throughout the commonwealth that intelligence which shall be its own reproducing power. There will be that culture that will make public sentiment so strong, so fruitful, that the inroads of illiteracy will be an impossibility and ignorance will be overthrown.

MINUTES OF THE INDIANA STATE TEACHERS' ASSOCIATION.

INDIANAPOLIS, TUESDAY, Dec. 26, 1882.

The Indiana Teachers' Association met in its twenty-ninth annual convention, in Plymouth Church, and was called to order at 8:30 P. M., by the retiring president, H. B. Jacobs.

Prayer was offered by Dr. R. T. Brown.

President Jacobs then delivered an informal address of welcome. [See it in full on preceding pages.]

The President-elect, Prof. H. S. Tarbell, then delivered his inaugural address. He thanked the Association for the honor conferred upon him in electing him to preside at this meeting, so soon after coming to the state, because it was a recognition that he is counted as one among the Indiana teachers. [His address on "The Relation of the Imagination to Educational Work," will be hereafter published in full.]

Samuel Lilly, of Gosport, was appointed Assistant Recording Secretary, and U. M. Rank Assistant Railroad Secretary.

Adjourned.

WEDNESDAY, 9:00 A. M.

The State Teachers' Association was called to order by H. S. Tarbell. Prof. Loomis, of Indianapolis, led the opening exercises, which consisted in singing "Nearer, my God, to Thee," by the Association.

The following committees were then appointed :

On Obtaining Situations—J. K. Walts of Logansport, W. H. Wiley of Terre Haute, Mrs. McRae of Muncie.

On Resolutions—J. J. Cooper of Evansville, M. Seiler of Terre Haute, Mary Nicholson of Indianapolis.

The first paper read was on "Relative Values of Discipline and Instruction in the Public Schools," by W. F. Yocum, Pres. of Fort Wayne College. [The paper will be printed in full.]

The discussion of this paper was opened by Edward Taylor, Supt. of the Vincennes schools. He said :

The acquisition of knowledge and development of mind is the object of our education. Mere accumulation of learning alone is not what constitutes education ; it consists in work. We have persons whose mental activity has run toward the accumulation of knowledge, but who have failed to use it, and the world has never been benefited by it. To impart knowledge without the ability to use it is like loading down our pupils with a mass of baggage instead of putting them in possession of tools which they can use with advantage. The world is asking, "What work can you do better in consequence of the discipline the schools have given you?" Unless they can answer that they are able to do better work, we may expect upon our work the popular verdict of "a failure."

There is in the minds of our pupils ability of which they are unconscious ; the ability to think, and to work, and to do real work [is what we should expect of our pupils.

Michael Seiler, of the State Normal, would place these two elements upon a level with each other. If the instructor gives attention to the matter of correct and orderly instruction, he need not be concerned about the discipline. That will naturally follow.

Dr. R. T. Brown said : All true teaching consists in the training of two faculties, (1) Correct Observation, and (2) Logical Thinking. Teach the child to observe everything in books and out of books, and to see everything in its relations. The student depends too much upon his ability to remember other people's ideas, rather than to do his own thinking. The power of thinking is the great faculty after all ; the ability to think, and then to *think aloud*.

W. A. Bell said : It occurs to me that different stages of education demand a varied emphasis in the application of the two thoughts before us. The little child is first employed in the acquisition of facts upon which to reason. As his course of study advances he reasons more. In the upper grades more attention is paid to the relation of the facts accumulated. Then still later the chief work is discipline.

J. M. Strasburg, of Richmond, thought that there should be a reform in the manner in which teachers are tested as to their ability for the work. As long as they are examined more with reference to what they have learned, than to what they have thought, so long we find teachers instilling the same principles into the minds of their pupils.

Mr. Tarbell said, in answer to the criticism upon the State Board questions, that the sentiment of the board is very different from its action. It is governed in its action by what is considered the desire of county superintendents and trustees. Theory and Practice would have a much more important place than they do have, if they followed their inclinations.

The discussion was continued at some length, and followed by a recess.

Mrs. Wells presented the subject of Temperance. She read a petition, prepared by the W. C. T. U., to be signed by the educators of the state, and presented to the coming Legislature, asking them to pass a law that the question of Temperance shall be taught in the public schools. She wished that the petition be adopted in the form of a resolution or by signature. [This petition was referred to a committee, consisting of Messrs. Seiler, Jacobs, and Woods.]

Miss Lida D. Hadley, of Richmond, then read a paper on

“ESSENTIALS IN EDUCATION.”

She considered the work of the teacher equal in importance to that of the minister. She named as essentials good primary training, health, moral training, directing to good literature, cultivation of eye and ear. There are responsibilities required at our hands which we have not fulfilled. If we wish to build a fine house we employ a master builder, but in the molding of the human mind we too often employ deficient workers, and the profession is often degraded by what might have been skilled labor. Primary teachers should understand mathematics and science. It is a mistake to think that *anybody* will do to teach the primary department. Teaching is like algebra. We use symbols and unknown quantities. In school work there is one quantity which often comes out minus when it should always be plus, and that is health. We forget the relation between the mind and the body. But there is coming a reaction. We can not waste our physical energies without becoming bankrupt. The more idle and inattentive pupils are, the more need they have of love. In Froebel's own words, “Let us love the chil-

dren." Let a white soul shine in your face, and let every fibre of your being thrill and give expression to your heart's best thoughts. In disciplining children that are restless and disorderly, "a recess is better than a spanking."

We should hold up to the pupils the beauty of knowledge, not as a task but a delightful privilege. They will learn by and by that pursuit is almost sweeter than possession. Every day's work should be planned. Nothing can supersede patient, thoughtful drudgery. Mere enthusiasm does nothing. General instruction should meet a definite need and follow a definite plan, and it should serve as many purposes as possible. We should teach slowly and accurately, always recognizing the fact that knowledge has a physical basis.

D. W. Thomas, of Wabash, opened the discussion of this topic in a well-arranged paper.

He thought that one essential should be an adaptation of the studies to the demands growing out of an orderly and natural mental growth. A teacher must understand the laws of mental action. In early parts of the course, pupils should pursue those studies which are objective and material, and which cultivate observation and acquirement; later in the course, those which tend to develop reason and judgment. Essentials in the teacher, are comprehensive knowledge of the mind and acquaintance with facts—knowledge which can be used with the pupils.

Adjourned.

AFTERNOON SESSION.—The first exercise in the afternoon was a short paper by Timothy Wilson, on the last paper of the forenoon. He thinks the science of government an essential of education.

After a song by the Association, led by Prof. Loomis, Howard Sandison, of the State Normal School, presented a very thoughtful and carefully prepared paper on "Psychology and the Preceptor." The thought of the paper was such that to understand it one must read it carefully and studiously.

The paper was ably discussed by Prof. Study, of Greencastle, who said:

As the minister must understand the mind that he may apply in theology the problems of practical life, and the lawyer must know the mind that he may awaken the sympathy and touch the heart of those who hold the interests of his clients, so the teacher should know the mind which is entrusted to his care for its development in its various functions. The mass of those who are making teaching a business to-day are almost utterly ignorant of this subject.

Dr. E. E. White, of Purdue, said:

The importance of a knowledge of the human mind must be conceded by all. I am glad our Normal School has taken hold of this work, and hope our Science of Education will be so formulated that teachers will have something to study on this. But in teaching, the teacher must forget this psychology. This may seem strange. The artist, when he so masters the principles of his art, that he unconsciously embodies them, is the true artist. We must see that our teachers do not grind out psychology before their classes. We must see that they are working without a consciousness of the principles they apply. With the class before him the teacher must be such a master of what he proposes to do, that he goes through with it without a thought of these principles. The teacher is not a true teacher until his pedagogic training disappears. The true orator never thinks when speaking about the accuracy of his speech. It should be a point to be made by every teacher to settle all questions of teaching outside of the school room, and then teaching will come out in its best form as naturally as a stream flows from its fountain. All true teaching comes from the contact of soul with soul, without anything coming between; it is spirit speaking to spirit.

After recess the Association was entertained by a recitation presented by Mrs. Nellie D. Horn, of Indianapolis.

Jesse H. Brown then presented an exercise to explain Drawing, as managed in the Indianapolis schools.

In grammar schools the work assumes three forms: The ornamental, representative, and constructive; these are preceded by primary and followed by advance work. These are points in the plan of teaching:

1. Figures of plane geometry underlie all the balance of the science.
2. A study of both natural and conventional forms.
3. A study of instrumental drawings.
4. A study of historical ornaments, as the acanthus leaf.
5. Attention to flat and round drawings.
6. Also to perspective and color.

Prof. L. S. Thompson, of Purdue, continued the subject by presenting some forms that may be used even in country schools. He closed by saying that the whole question of drawing is contained in position, direction, and distance. Adjourned.

EVENING SESSION.—At the beginning of the session the following Committee on Nominations was appointed:

First district, W. M. Vansickle; 2d district, E. B. Milam; 3d district, H. B. Jacobs; 4th district, J. H. Van Houten; 5th district, S. P. Neidigh; 6th district, R. W. Wood; 7th district, J. W. Stout; 8th district, W. W. Byers; 9th district, R. G. Boone; 10th district, C. P. Doney; 11th district, A. H. Hastings; 12th district, W. F. Yocum; 13th district, S. E. Miller.

President Tarbell then read telegrams from the State Associations of Kansas and Illinois.

After music by the Apollo Quartette, of Indianapolis, the annual address was delivered by Dr. Moss, President of the State University, on the subject, "Education and the Commonwealth." [See a full extract on preceding pages.]

THURSDAY MORNING, 9:00.

The Association joined in singing, led by Prof. Loomis, the hymn, "I need Thee every hour." Prayer was offered by Prof. J. H. Martin, of Madison.

The special committee on the Temperance petition presented the following:

Your committee beg leave to report that they consider that it at present is inexpedient to take action on the petition in question.

M. SEILER,
WILLIAM S. WOOD,
H. B. JACOBS,
Committee.

The report was concurred in, because of a desire to avoid, in the selection of studies, all mooted questions of morals or politics.

Mrs. L. D. Cunningham, of Madison, then read a paper on

"CULTIVATION OF THE POWERS OF EXPRESSION."

In this she said that there are two forms of expression, the natural and the artificial. The latter includes spoken and written language, music, painting, sculpture, etc., while the former embraces signs, gestures, and the articulate sounds which constitute the universal language which binds mankind together.

The various natural forms are evanescent. Something more permanent was demanded. Hieroglyphics were introduced. Dramas are numerous with children. They are naturally dramatic. The cat and dog are the characters in much of the child's life. They enjoy expressing what they hear and see. In beginning the devel-

opment, the word method in reading is preferable, because here the foundation for true expression is to be laid. The things necessary are ideas, words, and grammatical relations. We must have ideas. To originate ideas one must first begin by cultivating the imagination. First the external object, then the likeness of the object fixed in the brain by sight. Observation creates ideas. Let the children give expression to their ideas by relating what they have seen on their way to and from school. It is best to avoid direct criticism with children of all ages. They should be trained to give expression to their ideas on paper as soon as they can write short sentences. Without previous training this would be difficult, but now they are led to feel that they are only writing what they would otherwise say. Fluency depends on a command of language. Purity of language among us is affected by foreign pupils, by the presence of slang, and by poor or impure papers and books. To cultivate a taste for the good, read specimens of both good and bad literature to the children, and show the difference between them.

Too much can not be said of the charm of facial expression. The younger the child the more it depends upon this. The chief cause of the difficulty in inducing pupils of the upper grades to employ facial expression is lack of early training. Placidity of countenance detracts much from a speaker. He who would succeed in teaching expression must appeal to the inborn instincts of the early child-nature.

S. E. Miller, of Michigan City, opened the discussion of the paper by saying his remarks would be but an echo of the paper.

Cultivation of expression should include all means by which one may convey impressions to another. A pupil does not know well what he can not tell. Teach words by teaching their opposites and their meanings. Cultivate a knowledge of derivations and choice of words. Our experiences here are vibrations between opposites, from pleasure to pain, etc. Let children learn to read by using the written forms of their own thoughts. We can not express the thoughts of another, when we can not express our own. The meaning should bring out expression, and not the expression bring out the meaning.

C. W. Hodgin, of Rushville, in continuing the discussion, said:

The power of expression is one of the chief things the primary teacher is engaged in. One thought contained in the paper should be dwelt upon. While the little child is telling his story do not bring in any criticism until he is through. Nothing will throw cold water upon his enthusiasm so much as that. He will lose his inter-

out in completing what he has begun, and his class-mates will not dare to say anything lest they be taken down in the same way.

Prof. J. T. McAvoy: We should be guarded in the use of facial expression. It must come from the heart. I am not sure that such a thing as teaching it is within the province of the public school teacher. Gesture has nothing to do with speech; it says what the voice can not say, in another and a better way. Gesture is the bond of union between feeling and thought. The face expresses the feeling, then the hands, and then the voice. If this is within the province of the school teacher I shall be glad, for I have difficulty in teaching it to older pupils.

E. E. Smith, of Purdue University, said: That there seemed to be two objects of instruction in language: primarily, to enable the pupil to form ideas of his own, to express these in words, and to judge of them after they are expressed; secondly, to judge of the ideas as expressed by others. In the discussion, attention seemed to be directed almost solely to the expression, and to the judgment or criticism of the expression, by pupils. Back of both of these was the thorough possession of the idea or thought, without which both the expression and criticism must be inaccurate. Unless pupils are taught to observe, to group, and to reflect, there can not be much "power" in the "expression."

After a short recess, Mr. J. K. Walts moved that it be the duty of the Permanent Secretary and Treasurer to have published in the *Indiana School Journal* of February a report showing the financial condition of the Association. It was carried.

Charles F. Coffin, Supt. of the schools of New Albany, read a paper on

"THE TEACHING OF THRIFT IN THE PUBLIC SCHOOLS."

He said: Education is a mastery over time. When men gain any time above that needed to supply physical wants, they can make some advance toward a higher life. It is no slight difference whether men shall conquer time, or follow wherever he shall lead. It is the difference between being a slave in the world and a master.

The public school should teach the boys and girls the principles of economy. It should teach the value of money; its legitimate use, and its common abuse. To send children out into the world without such knowledge is as serious a neglect as to leave them ignorant of mathematics.

Poverty is not so much the result of low wages, as of improvident habits. Many mechanics receive salaries that professional men, lawyers, doctors, and teachers, would be glad to get. The laboring

man too often says to his soul: "Eat, drink, and be merry." When a time of social pressure comes, he is but a few weeks ahead of want. The evil of improvidence is deep-seated. It can not be removed by law. It can be removed only by business training in early life, and in the public school such training should be given.

How? By example. Teachers should use with care articles in the school-room. By precept. Pupils should be taught to use their books and clothes carefully. They should be taught economic maxims. Spend less than you earn. Pay ready money. Keep out of debt. Keep an account of receipts and expenses.

Iowa is trying a school-baking system, by which the schools are connected with the world of business. Whether these methods are the best or not, does not matter. Some kind of teaching in this very important branch should be given.

In a few generations the laborer would begin to own his house. He might find time to read a book, or admire a picture. He would cease to be a slave and become a master.

Supt. J. M. Bloss opened the discussion of this paper.

I most heartily endorse this paper. The schools are not simply for the purpose of giving intellectual culture. This alone never makes good citizens; never will make honest men and truthful women. There is no argument held before the people urging that they should be taxed to sustain the schools, that does not look forward to making better men and women. The man who fails to meet his obligations, who goes into debt for the support of his family or himself without any prospect of paying that debt, is dishonest. The object of the school should be to teach right habits of thought and action, that will be carried into practical life. The teacher who fails in this, fails in one of the most important duties.

The man who does not live within his income is dishonest. We should teach that to the children. We can teach thrift by example in the care with which we look after the material of the school; and we should teach the child to be careful, to save and protect his own school material. If you do that, you are fixing correct habits of saving that which is useful.

Is it not possible that we as teachers are so much interested in the intellectual growth of our children that we neglect their moral growth? Is it not true that we so magnify intellectual greatness that physical labor is ignored? The boy who does not know what physical labor is, is likely to grow up a spendthrift. We want to teach children what a cent is worth, and then they will know better how to spend it. I think this an important subject, worthy the consideration of every teacher, because we are looking forward to building up men and women, and not a class who are to be fostered and sustained by the state.

Prof. Amzi Atwater, of the State University, thought the paper on this subject the best he had heard since coming to the city, perhaps because it contained some of his favorite household maxims. He then gave the following rules, which he thought it would be well to write upon the black-board and impress upon the minds and hearts of the children: "There is no luxury so great as ready money." "If you can not have a fine house and have money in pocket, have a poor house." "The time to pay debts is when you make them." "The man who spends less than he earns is rich." "When you think of buying an article, put your hand in your pocket, and if you have not the ready money, don't buy it."

If the children do not see us with cigars in our mouths and spending money for a foolish thing that is not needed, then they will learn something from us. I feel that the writer of this paper has done us more service than any other person. To be master of the situation financially is one of the greatest things in the world.

Prof. L. S. Thompson thought that the teaching of drawing had much to do with impressing the minds of pupils with the dignity of labor.

Dr. J. S. Irwin, of Fort Wayne, endorsed the thought of Prof. Thompson. In the schools of Fort Wayne we put drawing into the hands of the children when they enter school. We try to make it educate the eye, the hand, and the head together. If you do not do this, you do not educate at all.

Can we derive advantages from the teaching of drawing? I can point to a number of boys between the ages of 16 and 17 who are now occupying profitable positions and obtaining good salaries as the result of cultivating a special talent for drawing. I can point to hundreds of homes to-day that were absolute hovels a few years ago, and receptacles for pigs, cows, and all sorts of animals, that now have about them neat fences, beautiful gardens, pictures on the walls, books on the tables, and children who can read those books, and parents who can thank God that they have had that education.

This transformation he considered as the effect of the introduction of drawing into the schools.

Geo. F. Bass, of Indianapolis, wished to take exceptions to the assertion that had been made that the person who does not live within his means is dishonest. A person may have to borrow money—may not be able to live within his income, and yet be honest.

AFTERNOON SESSION.—The report of the Committee on Nominations being called for, Chairman Jacobs, of New Albany, made the following report:

For President—Dr. John S. Irwin, Fort Wayne.

Vice-Presidents—Nathan Newby, Terre Haute; D. W. Thomas, Wabash; J. A. Kibbie, Kendallville; Timothy Wilson, Henry Co.; J. K. Walts, Logansport.

Secretary—Mrs. Annie E. H. Lemon, Spencer.

Railroad Secretary—George F. Bass, Indianapolis.

Treasurer—D. E. Hunter, Washington.

Executive Committee—J. N. Study, chairman, Greencastle; J. M. Strasburg, Richmond; Edward Taylor, Vincennes; W. H. Fertich, Mishawaka; Mrs. Emma Mont. McRae, Muncie; Wm. W. Fuller, Boonville; Mrs. R. A. Moffatt, Rushville.

The first paper was read by William A. Bell, of the Indiana School Journal, on "The Recent Criticisms on Public Schools." [The paper will be printed.]

The discussion of this paper was opened by E. H. Butler, of Winchester.

He thinks that many criticisms are made from the standpoint of ignorance. Something should be done to secure as good teachers for district schools as for the graded schools. We are going backward in the use of our mother tongue. We do not use as good English as did our forefathers.

Prof. S. K. Hoshour, the oldest teacher in the state, was called on, and made a few very interesting remarks in regard to his past work in the schools of this state. He expressed himself in favor of compulsory cessation of the liquor traffic and compulsory education.

TREASURERS' REPORT.

D. E. Hunter, Treasurer, in account with

	Indiana State Teachers' Association,	Dr.
Dec. 25, 1882.	To cash on hand.....	\$8 15
"	To amount received from members.....	126 00
"	To amount received from Bates House.....	50 00
	Cr.	\$184 15
Dec. 27, 1882.	By cash for Expressage.....	\$1 25
"	" Telegrams (Perm. Sec.).....	55
"	" Stationery.....	4 40
"	" Railroad Guide.....	25
"	" Envelopes and printing.....	37 25
28,	" Railroad Sec. bill of exp.....	18 10
"	" Telegrams (President).....	1 82

Jan. 9, 1883.	By cash for Rec. Sec. services, Indianapolis.	7 50
"	" " recd'g and cop'g Min.	6 00
"	" Perm. Sec., Indianapolis.....	7 50
"	" " recd's stat. and names	6 00
"	" Ex. Com., including hall rent...	64 90
"	" Expressage.	90
"	" Exchange and postage	30
"	" Deposited in Wash. Nat. Bank.	61 43
		<hr/> \$184 15

D. E. HUNTER, *Perm. Sec and Treas. I. S. T. A.*

RESOLUTIONS ADOPTED.

On motion of Prof. H. B. Jacobs, the following complimentary resolution was unanimously adopted:

Resolved, That this State Teachers' Association of Indiana deems it proper to put on record its high appreciation of the eminent services of Hon. J. M. Bloss as Superintendent of Public Instruction for the past two years. His experience in educational work, and his general knowledge of the various departments of the public school system of Indiana, have particularly fitted him for the high position he has occupied. The wise and efficient manner in which he has discharged the delicate and complex duties of his important office, has done much to advance the cause of popular education in this state, and to keep Indiana in the advanced position in school matters which she had reached under his predecessors. For Mr. Bloss personally we have the highest regard, and express the hope that we may long enjoy his presence, and the schools the benefit of his zeal and influence.

After a short recess the following report of the Committee on Resolutions was read and unanimously adopted:

It was with deep regret that the numerous friends of the late Hon. John I. Morrison received the news of his death. His ability, efficiency, honesty, and devotion to duty, in every station of life, gained for him the love and admiration of all who knew him.

He was born in 1806, in Franklin Co., Pennsylvania. He came to Indiana in 1826, and settled in Salem, Washington county. Here he established a school, which became widely known for the sound, practical learning and accurate scholarship of its pupils, among whom we have only space to mention John S. Campbell, Barnabas C. Hobbs, Washington C. De Pauw, General Nathaniel Kimball, and Newton Booth. He served in both houses of the State Legislature, and was a member of the Constitutional Convention. As chairman

of the Committee on Education, by the perseverance and determination for which he was noted, Mr. Morrison secured the adoption of the article on education, and was sole author of the section which secured the office of State Superintendent of Public Instruction.

The subject of this memorial held many offices of public trust, in all of which he was ever known as a most faithful officer. His high sense of duty, his broad culture, his zealous devotion to the cause of education, and his purity of life—all commendable and worthy of imitation as elements of character—though he be dead, still live to guide and instruct us. Therefore, be it

Resolved, That we will ever cherish the memory of the deceased as the co-laborer and special defender of public education in Indiana.

MISCELLANEOUS RESOLUTIONS.

Resolved, That the members of this Association recognize the value of these annual gatherings, where questions concerning the welfare of every class of society are discussed.

Resolved, That, as citizens and officials, we will use every endeavor so to influence those under our temporary guardianship that they may acquire the self-control whose result is temperance, and the moral purpose whose product is integrity.

Resolved, That the thanks of the Association are due to the officials of the several railroads centering here, and to the hotels of this city, for the low rates, excellent accommodations, and other courtesies extended to its members.

Resolved, That the Association hereby acknowledges its appreciation of the very efficient services rendered by its several officers in managing the business of the present session.

Resolved, That a vote of thanks be extended to the Apollo Club of this city for their excellent music.

During the meetings of the Association congratulatory telegrams were received from the State Associations of Kansas, Illinois, Wisconsin, Minnesota, and Michigan.

H. S. TARBELL, *President*.

ANNIE E. H. LEMON, *Sec'y*.

NAMES

Of persons Enrolled at the Annual Meeting of the Indiana State Teachers' Association at Indianapolis, Dec. 26, 27 and 28, 1882.

ADAMS COUNTY—G. W. Luckey, Bertha M. Luckey, Decatur.

ALLEN COUNTY—W. F. Yocum, John S. Irwin, Spencer R. Smith, Fort Wayne.

BARTHOLOMEW—Hugh S. Quick, Walter Wallace, John M. Wallace, Columbus; E. D. Bosworth, Oxford.

BENTON—Mattie Tallmadge, Fowler.

BOONE—T. H. Dunn, D. D. Blakeman, O. C. Charlton, Lebanon; W. H. Ashley, Jamestown; S. N. Cragun, Zionsville; A. Bosenberger, Thorntown.

BROWN—S. P. Neidigh, Nashville.

CARROLL—O. C. Sterling, Camden; Winnie C. Scott, A. W. Dunkle, Mary B. McReynolds, Emma B. Shealy, S. B. McCracken, Delphi; Jacob Barnard, Flora.

CASS—Fannie Knowlton, Ella G. Knowlton, C. P. Doney, J. K. Walts, Alice I. Carter, Logansport.

CLARK—Amelia Platter, D. S. Kelly, Jeffersonville.

CLINTON—R. G. Boone, Lillie Claybaugh, Annie Claybaugh, Jennie E. Horning, A. M. Huycke, D. E. Kempt, Frankfort; Edgar A. P. Haynes, J. Hopkins, Kirklín; M. E. Locke, Michigantown.

CRAWFORD—J. S. Hall, English; Henry Gregory, Jr., Leavenworth.

DAVISS—Alice C. Evans, W. F. Hoffmann, D. E. Hunter, S. B. Boyd, Washington.

DEARBORN—H. B. Hill, Aurora; R. S. Groves, Aurora.

DELAWARE—Mary E. Mason, Alta Stiffers, Emma Mont. McRae, Hamilton S. McRae, Muncie.

ELKHART—T. B. Swartz, Elkhart; L. B. Nusbaum, Wakarusa.

FAYETTE—J. S. Gamble, J. R. Rippetoe, Connersville; Belle Taylor, Everton.

FLOYD—Charles F. Coffin, Fannie M. Beach, Jenny Day, H. B. Jacobs, Robert A. Ogg, New Albany.

FOUNTAIN—J. Martin McBroom, Attica; H. M. McKnight, Covington.

FRANKLIN—M. A. Mess, Brookville.

FULTON—James F. Scull, Rochester.

GIBSON—A. J. Snoke, Princeton; Joshua A. Sisson, Francisco.

GRANT—Mrs. Wm. Russell, William Russell, L. E. Wheeler, A. H. Hastings, G. A. Osborn, W. T. Brownlee, Marion; R. Nelson, Fairmount.

HENRY—Ludovic Estes, Thomas Newlin, Timothy Wilson, Spice-land; Emma Kennar, Knightstown; F. D. Tharp, Raysville.

HENDRICKS—J. B. Ragan, North Salem; Phebe Furnas, Friendswood; Elva T. Carter, T. J. Charlton, Anna L. Osborn, Plainfield.

HOWARD—Sarah Ellis, Ella M. Jones, Sheridan Cox, Kokomo.

HUNTINGTON—Laura E. Agan, Huntington.

JACKSON—Martin Kuehn, Dudleytown; M. C. Clifton, William S. Wood, Sallie Crawford, Seymour.

JAY—Morgan Caraway, Portland.

JEFFERSON—Annie Moore, Hanover; J. H. Martin, L. C. Lawrence, Rebecca L. Lodge, Madison.

JENNINGS—Amos Sanders, Vernon.

JOHNSON—Alice R. Palmer, Franklin; J. Edw. Wiley, Greenwood; Mattie Morgan, Jonathan Rigdon, J. C. Eagle, Nellie H. Loomis, Edinburg.

JASPER—C. P. Mitchell, Rensselaer.

KNOX—Edward Taylor, E. B. Milam, Jno. M. Chansler, Vincennes.

KOSCIUSKO—Samuel Resser, Silver Lake; John P. Mather, E. M. Chaplin, Warsaw.

LA GRANGE—E. G. Machan, B. J. Bogue, La Grange.

LA PORTE—S. E. Miller, Michigan City.

MADISON—R. I. Hamilton, Anderson.

MARION—Annie Tibbotte, Irvington; L. M. Rankin, Mary R. Wilson, Jabez Montgomery, John M. Bloss, Sarah H. Harrison, Bruce Carr, John Walker Holcombe, L. P. Harlan, M. E. Nicholson, Geo. B. Loomis, Isabel King, Anna L. Sweet, W. W. Grant, George F. Bass, T. J. McAvoy, W. H. Bass, W. A. Bell, Kate A. Thompson, Mrs. Lida M. Hopkins, Agnes R. Rankin, J. W. Graham, Nettie Simpson, M. L. Rinehart, Geo. W. Hufford, Lewis H. Jones, H. S. Tarbell, Emma Donan, A. C. Shortridge, Augusta Franck, A. Frank H. Crist, Indianapolis.

MIAMI—Alice M. Tudor, Denver; Geo. H. Caraway, Xenia.

MONROE—Susan A. Goodale, Clear Creek; Lemuel Moss, Amzi Atwater, Bloomington.

MONTGOMERY—P. H. Kirsch, Lindsey Fleming, Crawfordsville.

MORGAN—J. R. Starkey, E. W. Paxson, George W. Pearce, Martinsville; C. H. Copeland, Monrovia.

OWEN—Mrs. M. M. G. Lilly, Samuel Lilly, Gosport; Annie E. H. Lemon, Samuel E. Harwood, Spencer.

PARKE—Fred E. Allen, Annapolis.

PIKE—W. M. Van Sickle, Petersburg; N. C. Johnson, Stendal.

POSEY—P. D. Alexander, Mt. Vernon.

PUTNAM—Miss Jodie Hays, L. E. Smedley, J. N. Study, Greencastle.

RANDOLPH—E. H. Butler, Winchester; F. Treudley, Union City; Elias Boltz, J. O. Pierce, R. N. Harrison, Ridgeville.

RIPLEY—Thomas Bagot, New Marion; Will P. Hart, Versailles.

RUSH—Cyrus W. Hodgin, Mrs. R. A. Moffitt, Rushville.

SHELBY—R. S. Page, W. R. Snyder, Shelbyville.

STARK—George A. Netherton, Knox.

ST. JOSEPH—Mary Ryan, North Liberty.

SULLIVAN—F. V. Westfall, Merom.

SWITZERLAND—James R. Hart, Vevay.

TIPPECANOE—L. S. Thompson, W. M. Rank, E. E. Smith, Henry A. Huston, La Fayette; H. M. La Follette, Farmer's Institute.

TIPTON—W. H. Clemmons, Dora Montgomery, Tipton.

VANDERBURG—Maria E. Howell, Jno. Cooper, R. Spear, Evansville.

VIGO—M. Seiler, W. W. Byers, Mrs. Lizzie S. Byers, N. Newby, Terre Haute.

VERMILLION—A. A. Parker, Quaker Hill.

WABASH—Julia Cannon, La Gro; D. W. Thomas, Wabash.

WARREN—A. Nebeker, W. S. Walker, Williamsport.

WAYNE—Viola M. Ewers, R. W. Wood, Milton; Lida D. Hadley, John R. Sherrick, J. A. Zeller, W. H. Winslow, Laura J. Strasburg, J. M. Strasburg, Richmond.

WELLS—Flo K. Kocher, Ella Loser, Bluffton.

WHITE—F. D. Haimbaugh, Brookston; F. W. Hanawalt, Monticello; W. Ireland, Wolcott.

New members, 142; Old members, 142; total, 214.

D. E. HUNTER, *Perm. Sec'y.*

[The above is only about one-half the actual attendance. About 390 were registered at the two leading hotels. Those stopping at other hotels and with friends, and those who live in Indianapolis and Marion county, will easily swell the number to 500.—ED.]

PRIMARY GEOGRAPHY.—“From the known to the unknown” is a good precept. Of geography there is but little that any child can know. The geography of the school-room, school-yard, and possibly a part of the neighborhood comprises about all of it. Begin with this, then, if you like: Use the slate and the black-board from the first. Draw maps; make map-drawings the plaything of the school-room. It is gratifying to see our little First Reader toddlers draw a third of the United States on the black-board at one effort, beginning with the State of Indiana. Granted that the school-room and local geography shall be the first step. 2. Master the geography of your own county. Be able to produce a fair map of it from memory, with the larger villages, streams, railroads, townships, etc. 3. Draw a map of your congressional district, outline all counties without townships except the home county, and locate all county-seats; give population of counties and county-seats. 4. Master the geography of your state; locate all rivers and other bodies of water; locate ten of the large cities, and give their population and county. 5. Assign each pupil a State and require him to produce the outline with rivers, mountains, four or five large cities, including the capital, together with their names, on the slate. Require them to re-produce these from memory on the black-board. One State every two days or week will be sufficient. We know of no exercise which will so familiarize young pupils with their own country, and at the same time train the eye and the hand.

Illustration.—As we sit at our desk writing, there is before us on the black-board, in one place a map of Indiana; written beside are the names of twelve cities, and the rivers. In another place is a map of Tennessee; written by it are the names of four cities, three rivers and two mountain ranges. There are fifteen or twenty other states also on the black-board. These were all drawn on yesterday afternoon while we heard a class recite. And one advantage we claim for the method is, it requires scarcely any of our time.—P., *the Peru Republican*.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

Does your subscription to the Journal expire with this issue? If so renew at once, that there may be no break in your file. Do not fail to send in time to secure the January number.

THE Report of Supt. Bloss is out, and each county's proportionate share has been shipped to the county superintendent. Any one not able to get a copy from his own superintendent can secure the same by writing to Supt. Bloss and enclosing 14 cents for postage.

THIS number of the Journal is largely occupied with the proceedings of the State Association. This does not prevent, however, the usual variety of matter. The address of retiring President Jacobs will be found to contain suggestions worthy of careful thought.

The address of President Moss is a master-piece, and should be read by every one.

Each topic discussed furnishes "food for thought."

With 390 teachers registered at the two leading hotels, and at least 500 in attendance upon the State Association, it "looks bad" that only 214 should enroll and pay their annual fee. In most instances, doubtless, it has come of mere carelessness, and not on account of an unwillingness to bear a proportionate part of the necessary expenses of the Association. The result is the same, however—*all* enjoy the privileges and benefits, and *a part* do the paying.

Indiana now has more than 5000 miles of railroad within its borders, 500 of which were constructed within the last year. Never before were so many miles made in any one year within the state. Of the 92 counties in the state, each is crossed by at least one railroad *except four*, and three of these border on the Ohio river. Those on the river are Ohio, Switzerland, and Perry. The unfavored inland county is Brown. No state in the Union is better supplied with railroads. *Fourteen* of them now centre at Indianapolis.

COMMISSIONED HIGH SCHOOLS.

The high schools in the state that have been commissioned, and whose graduates can enter the Freshman class of the State University without examination, are the following:

Attica, Bloomington, Cambridge City, Carthage, Columbus, Connersville, Covington, Edinburg, Evansville, Frankfort, Franklin, Goshen, Greenfield, Greensburg, Indianapolis, Knightstown, Kokomo, Lawrenceburg, Logansport, Madison, Martinsville, Mitchell, Muncie, Peru, Rockville, Sullivan, Terre Haute, Union City, Valparaiso, Vevay, Vincennes, Washington, Winchester, Worthington.

THE ASSOCIATION has come and gone, and those who were present will bear testimony to its interest and value. The attendance was unusually large, and all felt well repaid. The chairman of the executive committee had things well arranged and everything passed off smoothly.

The Journal will never be entirely happy until the programmes for these meetings are so arranged as to give more time for the *discussion* of important subjects. One or two persons are usually named to *open* the discussion of a paper; as a rule these appointed speeches also *close* the discussion. In short the Journal would be glad to see a programme so arranged that the executive officers would not be "*driven* from the word go" to complete it. No one is to blame for this. It is simply a *habit* of the Association. Let us have a rest.

OLIVER WENDELL HOLMES, author of the "Autocrat of the Breakfast Table," etc., has recently resigned his Professorship in Harvard University in order that he may devote himself more fully to literary pursuits.

During the year 1883 he will write exclusively for *The Atlantic Monthly*, to which he has from the beginning been one of the most constant and most highly valued contributors.

The first of his contributions to the *Atlantic* for 1883 is "An After-Breakfast Talk" in the January number, quite in the spirit, and marked by the wisdom and wit of the original "Autocrat" papers.

"There is no man," said John Greenleaf Whittier on his seventy-fifth birthday, "who ought to write much after he is seventy, unless perhaps it may be Dr. Holmes. He ought to write from now until he is one hundred. He is charming in everything he writes, and there is such a wonderful variety in his work that it seems a pity he should ever stop."

A NOTED RAILROAD.

The longest railroad, entirely in the State of Indiana, in a continuous line, is the one running from Jeffersonville to Michigan City, now called the "Louisville, New Albany & Chicago." From Jeffersonville to Michigan City, by this road, is 286 miles. It is not only noted for being the longest road, but also for being the crookedest road in its southern part, and the straightest in its northern, of the roads in the state. North of La Fayette it runs more than 60 miles on a "bee line." It is further noted for having a penitentiary at each end, and having located on its line De Pauw College, at New Albany; the Southern Indiana Normal, at Mitchell; the State University, at Bloomington; Asbury University, at Greencastle; Indiana Central Normal, at Ladoga; Wabash College, at Crawfordsville; Purdue University, at La Fayette; and near its line, the Northern Indiana Normal, at Valparaiso.

In this case it would hardly be proper to say "the product of the means equals the extremes," or *vice versa*; but it may with propriety be said that the "extremes" *justify* the "means."

THE STATE SUPERINTENDENT'S REPORT.

Superintendent Bloss's Report for the two years ending August 31, 1882, is now out. It is full of valuable information in regard to the educational matters of the state, and compares favorably with any former report.

Among the subjects considered are the following: School buildings and school accommodations; examination for state licenses; questions for county examinations; outline of county institute work; reports of county superintendents; needed legislation; county superintendency; the teacher; reading for teachers; the university system; the state's higher schools; papers by county superintendents on a great variety of live school topics; and a large number of statistical tables.

From the tables we learn the following facts: That De Kalb pays the lowest wages to teachers, the average per day being, for males \$1.49, for females \$1.06; with Wells not far in advance, paying males \$1.59, and females \$1.19. Marion pays males \$2.35 and females \$2.17; Howard pays males \$2.33 and females \$2; Madison is paying males \$2.23 and females \$2.18. These are the highest averages.

During the last year 22,327 teachers applied for licenses to teach, of whom 9,278, or 41 per cent. were rejected. This indicates that the standard of qualification is being raised.

The average duration of schools in the state was 133 days. Only three counties fell below 100 days. Washington and Orange each 99, and Brown 94. Union county leads with 163 days.

In 40 cities named the average number of pupils assigned to each teacher is given. In Evansville and Madison (the lowest) the number is 44. In Lebanon the number is 76, and in Brazil 91—(murder of the innocents.)

The census shows 70,008 persons over 10 years of age unable to read. The total enumeration of children in the state was 708,596; the number who were enrolled in school was 498,792, and the average daily attendance was 305,519.

SCHOOL LEGISLATION.

Three weeks after the convening of the Legislature, fewer school bills have been introduced than ever before in the same length of time, at the beginning of the session. The following are the bills so far:

Representative Graham has introduced a bill providing for the permanent endowment of the State University by the interest from non-negotiable bonds, similar to the school fund revenue system now in vogue. A tax of 2 per cent. on the \$100 of valuation is to be levied, this and each year until 1889, and the proceeds from this is to go toward the payment of the interest-bearing debt of the state. As a recompense for this, non-negotiable bonds, payable in fifty years at 5 per cent. interest, which shall go to the university, are to be issued to the amount of the debt that is paid off with each succeeding year. The auditor of state is further authorized to loan the proceeds from this tax assessment, if it can not be made available in any other way, at 6 per cent. interest for the benefit of the university.

This bill should by all means become a law. It is a disgrace that every Legislature the friends of the university have to come to Indianapolis and "log-roll" through a sufficient amount of money to keep the institution running for the next two years.

A bill has been introduced reducing the rate of interest on the school moneys from 8 per cent. to 6 per cent.

As this would reduce the revenue more than \$200,000, and as most of the money is now loaned at 8 per cent., the bill will most likely fail, as it should.

A bill has been offered, making the office of county superintendent a four-year office. This is certainly a commendable move. A new man in such an office has only begun to do his best work at the end of his second year.

A bill providing that the state shall furnish text-books to children at wholesale prices is not likely to get through. While the reduction of price and the *uniformity* throughout the state are strong points in its favor, there are also serious objections. It is doubtful whether the state should undertake to do so much for the people. It could save them money by furnishing them boots and shoes at wholesale, but would it be wise?

A bill providing that a 6-month license shall be regarded a trial certificate, and not renewable, and providing for the extension of time for which a license may be issued, and for permanent license, is recommended by Supt. Bloss.

BANDS OF MERCY.

Attention is again called to the subject above named. In the January number of the Journal there were two articles on the subject, to which readers are again referred.

Kindness to Dumb Animals is a subject that belongs in every grade of every course of instruction. It belongs in lessons in morals, and it belongs in lessons in religion. It is for the teacher to say whether or not this subject shall be effectively taught. We owe it to the dumb animals who can not speak for themselves, to say a word in their behalf.

The spirit that protects helpless creatures from cruel treatment is that same spirit that "makes the world akin."

Let every teacher in Indiana not only talk to his school on this subject, but devise some means by which others shall take an active interest. Select anecdotes of animals, articles and poetry referring to them, have essays written about them, intersperse these exercises with singing, and on February 23d invite in the patrons of the school and have a meeting that will do good not only to the scholars but to the entire neighborhood. Hold the entertainment in either the afternoon or evening, as may suit best—but *hold it*.

If you lack material, send to "The Massachusetts Society for the Prevention of Cruelty to Animals," 96 Tremont St., Boston, and get a supply, for almost nothing.

LIFE INSURANCE.—The Journal has been re-assured that its position in regard to life insurance in *cheap* (?) companies organized for the "special benefit of teachers" (sic) is right. The Journal believes in life insurance, but it feels that it is doing teachers a great favor in advising them to make very careful and thorough investigation before insuring in any other than a well established and *tried* company.

SCHOOL HOUSES AND SALOONS.

* The temperance question is in one sense a political question; in another sense it is not. The means and methods by which the liquor traffic shall be legally limited and controlled is a political question; temperance and its effects upon the body, mind, and morals of a person, and its influence on society, is a moral and not a political question.

While a teacher, *as a teacher*, may not be at liberty to enter into the political phase of the question, the moral side is certainly within the sphere of his privilege and his duty.

While it would be unwise for a teacher to advocate before his school Prohibition, Local Option, or License, he may—*no* he *ought* to judiciously and earnestly give instruction as to the ravages of intemperance on soul and body.

The great work of temperance must be done through the children. Fifty boys can be *educated* to grow up into temperate men, more easily than one drunkard can be reclaimed.

The following facts taken from the *Monitor-Journal* are food for thought:

Indiana has 9,556 school houses and 5,100 places where liquor is sold; only 1,750 of which are regularly licensed saloons paying their one hundred dollars each to the school fund. This makes an average of \$18.31 for each school house received from the whisky license. From the school house in the near future will come the army to take the place of the people that now spend \$21,000,000 annually in Indiana for intoxicants and their attendant evils, or an average for each school house of \$2,197.47 each year, saying nothing about the sorrow, broken hearts, death, and destruction generally caused by the traffic. Of 60,000 people that yearly go to drunkards' graves, Indiana's quota is about 2,000, and for each one of these ruined lives and ruined souls the school fund receives \$87.50.

SELLING EXAMINATION QUESTIONS

The readers of the Journal will recall what was printed some months ago in regard to selling examination questions, and the detection of the superintendent concerned. It will be remembered that Supt. Bloss became convinced that the questions came from Ziba F. Williams, puperintendent of Martin county, and that he impeached him before his county commissioners. The commissioners found him guilty and deposed him, but he appealed the case to the Circuit Court, and so continued in office. The case was reached, re-heard,

and decided January 27th, and the verdict was again against Mr. Williams.

J. H. Nichols, Williams's brother-in-law, also implicated in the selling of questions, testified that one Benson stole the questions out of Williams's pocket. Judging from the decision, the judge did not give much weight to this evidence.

The result of this important affair ought to be sufficient to prevent further traffic in questions, and Supt. Bloss deserves credit for the persistence and skill with which he developed and prosecuted this case.

THE PAY OF TEACHERS IN COUNTRY SCHOOLS. ✓

It has been said that a good teacher is never paid enough, and that a poor one is always paid too much. While this is very true, and is entitled to the careful consideration of those clothed with the authority of employing teachers, there is another difference in salaries which should also receive attention. I allude to the pay of teachers in the ungraded schools of the country districts. The pay of these teachers in this state, when compared with the pay received by the teachers in towns and cities, is from 30 to 50 per cent. less. When we contemplate the work done by each, it will be clearly seen that there is no good reason why this should be so. The work in the country school is equally as arduous and perplexing as in the city schools, and possibly more so, for there the teacher is thrown wholly upon his own resources, having no principal or superintendent to assist him in his work. Having to hear recitations in many different subjects, he must necessarily make more preparation than the teacher in the graded school. There the teacher becomes familiar with the grade work, and, therefore, less preparation is required. But the teacher in the country school, besides having more branches to teach, is likely to have new classes formed in the branches from time to time as the advancement of pupils may require. Besides, this discrepancy in wages is apt to drive the energetic and efficient country teacher into other work, or into the cities and towns where he can secure pay commensurate with his ability and services.

The boys and girls of the rural districts are certainly entitled to as competent instructors as the children in cities and towns. But this can not be so as long as there is so much difference in salaries. The teacher who has graduated from a normal school, or one who has, at great cost and expense, availed himself of other means of fitting himself for the work of teaching, is going to seek employment where he can receive the best pay.

While none but good teachers should be found anywhere, it is

absolutely important that efficient ones be found in the country schools, for there the terms are of necessity shorter than in cities, and, hence, the best possible work should be done while the schools are in session.

It is hoped that at no distant day the teacher in the country school will receive a salary more nearly equal to that of his fellow-teacher in the town and city school. There are some reasons, perhaps, why the pay of the teacher in the country school can not be quite equal to that of the teacher in towns and cities, but so great a difference as is now found should certainly not exist. * * *

The Normal Teacher, of Danville, has been merged in "The Normal Examiner," and is called "The Normal Teacher and Examiner." It is now in newspaper form, and monthly as before. This is certainly a backward step. While the new form is much cheaper, it is much less convenient. An educational article that is of real value, is one that will be as good next year as it is to-day, and should be preserved for reference. It is almost impossible to keep a newspaper, and no one thinks of binding and preserving them

The paper is edited by Frank F. Prigg, Supt. of the Danville schools, and published by J. E. Sherrill.

GEMS OF THOUGHT.

Parting with friends is temporary death,
 As all death is. We see no more their faces,
 Nor hear their voices, save in memory;
 But messages of love give us assurance
 That we are not forgotten. Who shall say
 That from the world of spirits comes no greeting,
 No message of remembrance? It may be
 The thoughts that visit us, we know not whence,
 Sudden as inspiration, are the whispers
 Of disembodied spirits, speaking to us;
 As friends, who wait outside a prison wall,
 Through the barred windows speak to those within.

[Longfellow.

Be to my faults a little blind,
 And to my virtues wondrous kind.

He that swells in prosperity is sure to shrink in adversity.

To see what is right and not do it is want of courage.—*Confucius.*

An *oath* is a vain formality which binds no scoundrel and strengthens not the statement of an honest man.

However things may seem, no evil thing is success and no good thing is failure.

I live for those who love me,
Whose hearts are kind and true;
For the heaven that smiles above me,
For the good that I can do.

Lives of great men all remind us,
We can make our lives sublime,
And departing leave behind us
Foot-prints on the sands of time.

We can never be too careful
What seeds our hands may sow.
Love from love is sure to ripen,
Hate from hate is sure to grow.

Sixty seconds make a minute;
Use them well and you will win it.
Sixty minutes make an hour;
Use them well while in your power.

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS FOR DECEMBER.

ARITHMETIC.—1. If the difference in longitude between two places be known, how do you determine the difference in time? 10

2. If 3 men earn \$24 in 2 days, in how many days can 7 men earn \$84? Solve by analysis. proc. 5, ans. 5.

3. Simplify and reduce to lowest terms, $\frac{1}{14} + \frac{1}{14}$. proc. 5, ans. 5.

4. $(.00493 \times 1000) \times (1 - \frac{1}{4} + .025) = ?$ proc. 5, ans. 5.

5. How many feet, board measure, each board being 18 in. wide, can be cut from a square log 16 ft. long, 18 in. wide, and 9 in. thick, allowing $\frac{1}{4}$ in. for each cut of the saw? What will it all be worth at \$7.50 per m.? proc. 4, each ans. 3.

6. If 12 men can do a piece of work in $5\frac{1}{2}$ days, in how many days can 8 men and 5 boys do it, 1 man doing the work of $2\frac{1}{2}$ boys? By proportion. proc. 5, ans. 5.

7. If a note for \$5000, at 4 mo., with 6% int. per annum, be discounted in bank, on day of making, at 8% per annum, what will be the proceeds? proc. 5, ans. 5.

8. If it cost \$312 to fence a field 216 rods long and 24 rods wide, what will it cost to fence a square field of equal area? proc. 5, ans. 5.

9. A merchant bought goods at 20 cts. a yard, and sold them at 40% net profit, after allowing his customers 12½% discount off: at what were the goods marked? proc. 5, ans. 5.

10. A farmer allows 1 acre of pasture for 5 sheep, and one acre plowed land for 8 sheep: how many sheep can he keep on 325 acres? By analysis. proc. 5, ans. 5.

GRAMMAR.—1. What parts of speech have comparison? Give an example of each, compared. 4, 6.

2. Define voice, mode, tense. 4, 3, 3.

3. What is a principal verb? An auxiliary verb? 5, 5.

4. What is a modifier? How many kinds? Give an example of each. 4, 2, 2, 2.

5. How does a complex sentence differ from a compound sentence? Illustrate by examples. 6, 2, 2.

6. Analyze the following: What by intrigue, and what by bribery, he accomplished his object. 10

7. Analyze: "The dial instituted a formal inquiry, when hands, wheels, and weights protested their innocence?" 10

8. In the above, parse *when*, *protested*. 5, 5.

9. Correct the following, if wrong: Do not do like he did. Give no more trouble than you can possible help. 10

10. Punctuate: Emulation is a dangerous passion to encourage in some points in young men it is so linked with envy if you reproach your son for not surpassing his school fellows he will hate those who are before him. 10

PENMANSHIP.—1. Describe the manner of holding the pen. 10

2. What is the height of *r* and *s*? 5, 5.

3. What letters are extended three spaces above the base line? Three spaces below? 5, 5.

4. Write the capital letters in which the seventh principle occurs. Analyze the principle. 5, 5.

5. Analyze *i*, *u*, *v*, *l*, *g*. 5 pts, 2 each.

NOTE.—Your writing, in answering the above questions, will be taken as a specimen of your penmanship, to be marked 50 to 0.

READING.—1. What are the defects or disadvantages of the alphabetic method of teaching primary reading? Give two or more. 10

2. What are the difficulties in the use of the phonic method? How may they be overcome? 2 pts, 5 each.

3. Why should the meaning of words receive attention in a reading drill? 10

4. How may the meaning of words be best taught? What is your opinion of the definition method? 2 pts, 5 each.

5. What means may be employed to teach pupils to recognize and name, at sight, all the words in a reading lesson? 10

6. Read a paragraph of prose and one or more stanzas of poetry. (The selections may be made by the superintendent or by the applicant.) 2 tests, 1 to 25 each.

U. S. HISTORY.—1. What is the difference between Biography and History? 10

2. (a) When and (b) where did Columbus first discover the American Continent? a 5, b 5.

3. Name the first Spanish and the first Dutch settlements in the United States. 2 pts, 5 each.

4. Name the kinds of government that were established over the colonies. 2 pts, 5 each.

5. Name two important battles that occurred in 1777; two in 1780. 4 pts, 3 off each one.

6. Name three of the most prominent advocates of the adoption of the Constitution. 3 pts, 4 off each one.

7. Name a prominent early advocate of the doctrine of Nullification. 10

8. Name the Presidents who have held the office for four years only. 10

9. Name the commanders of the Army of the Potomac in the civil war. 3 pts, 4 off each one.

10. Name three eminent biographers of Washington.

NOTE.—No answer to exceed ten lines.

3 pts, 4 off each one.

PHYSIOLOGY.—1. Why may a sprain prove to be a greater injury than a fractured bone? 10

2. Why do some persons swing the hands violently when walking? 10

3. What are three uses of the nails? How do nails grow? 4 pts, 3 off each one.

4. How many circulations are there in the human system? What is the office of each? 4 pts, 3 off for each one.

5. What does the blood lose in the lungs? What does it gain? 2 pts, 5, 5.

6. Where does the blood become impure? How? 2 pts, 5, 5.

7. How can you breathe the impure air of a sick room with comparative safety? 10

8. Would you advise the presence of flowers and plants in the school room? Why? 2 pts, 5 each.

9. Name two ways by which the teacher may determine when the air of a school room is impure. 2 pts, 5, 5.

10. What is the physiological effects of alcohol upon the circulation? 10

GEOGRAPHY.—1. What is the earth's orbit? Why is it cold in winter and warm in summer? 5. 5.

2. Name and describe four natural divisions of water. 4 pts, 2½ each.

3. Into how many classes is mankind divided, in regard to social conditions? 10

4. Describe the longest river in South America. The longest in Europe. 5. 5.

5. Where is Cape Horn? What is Terra del Fuego? 5. 5.

6. Name the political divisions of the Dominion of Canada. 10

7. Name the Middle Atlantic States. Describe the surface of New York. 5. 5.

8. Where are the Bermuda Islands? To whom do they belong? 5. 5.

9. How is Salt Lake City situated? Describe Utah. 5. 5.

10. Which is the most elevated lake in the world? Name the five largest lakes in the world. 4. 6.

ORTHOGRAPHY.—1. What is the distinction between a vowel and a consonant? 10

2. What two letters represent both vowel and consonant sounds? When do they represent vowels? 2 pts, 5 each.

3. What sounds has *ch*? Give words illustrating each sound. 2 pts, 5 each.

4. What is the distinction between accent and emphasis? 10

5. Write each of the following words phonically, representing each vowel sound by the proper diacritical mark: *Vein, rough, receipt, schism, knowledge*. 5 pts, 2 each.

6. Write ten words dictated by the superintendent. 10 pts, 5 each.

THEORY OF TEACHING.—1. Why should a teacher possess a good physical constitution? 20

2. If the teacher habitually scolds in the school room, what is the effect produced upon the pupils? 20

3. What is the object of government in the school? 20

4. Name four ways by which you can secure the respect of your pupils. 20

5. Name four of the objections to frequent concert recitations. 20

ANSWERS TO STATE BOARD QUESTIONS FOR JANUARY.

ARITHMETIC.—1. *a.* 1 lb. Troy = 5760 grains.

b. 172 lbs. Troy = 990720 grains.

c. 1 lb. Avoir. = 7000 grains.

d. 990720 grains = 141 lbs. 8 oz. 8 º dr. avoir.

2. If $\frac{3}{4}$ tons cost \$3.75, $\frac{1}{2}$ will cost $\frac{1}{2}$ that, or \$1 87 $\frac{1}{2}$; and 1 ton will cost 3 times $\frac{1}{2}$, or \$5 62 $\frac{1}{2}$.

3. Since \$1 at interest for the given time will amount to \$1.17, it will require as many dollars to be at interest for that time as \$1.17 is contained in \$761 44, which is \$650.80 +.

4. *a.* The time for which the note will be discounted will be 90 days less 16 days, or 74 days

b. \$650 will therefore be the present value of a note to run 74 days, at the given rate.

c. \$650 at interest for 74 days at 7% per annum will amount to \$659 35.

5. *a.* The diagonal of a parallelogram 20 ft. \times 16 ft. = 25 6125 ft.

b. The diagonal of a parallelogram 25 6125 ft. \times 12 ft. = 28.28 + ft.

6. *a.* As St. Petersburg is 30° 2' east long., and Indianapolis is 86° 10' west long., Indianapolis is 116° 12' west of St. Petersburg, and therefore slower in time.

b. As 1° in long. = 4 min. in time, Indianapolis will be 7 h. 44 min. 48 sec. west, or 7 h. 5 min. 12 sec. P. M. Tuesday.

7. As 1 quintal = 10 myriagrams, or 100 kilograms, or 1000 hectotograms, or 10000 dekagrams, 491 dekagrams will be .0492 of a quintal.

8. *a.* The solid contents of a brick = 8 c. in. \times 4 \times 2 $\frac{1}{2}$ = 80 c. in.

b. The solid contents of the wall will be 1728 c. in. \times 120 \times 8 \times 1.5 = 2488320 c. in.

c. As 1 brick contains 80 c. in., it will require bricks equal to 2488320 \div 80 to build the wall, or 31,104.

9.
$$\begin{array}{l|l} 6 : 24 & \\ 20 : 200 & :: 16 : 1280 \\ 6 : 8 & \\ 4 : 6 & \end{array}$$

10. *a.* The farm will contain in sq. rods (140 \times 160) + 100 = 22500.

b. The side of the farm = $\sqrt{22500}$, or 150 rods.

READING.

1. "I had a dream which was not all a dream :

The bright sun was extinguished, and the stars

Did wander darkly in th' eternal space,

Rayless and pathless, and the icy earth

Swung blinding and blackening in the moonless air."

[From *Darkness*.

These are the first lines of a poem written by Geo. Gordon Noel (Lord Byron), born in London, England, Jan. 22, 1788. He was a man of strong attachments and passionate disposition, leading him both to oppose and defend many things in his short life without either justice or discrimination. The most prominent events of his life were his school days at Harrow and at Trinity College, Cambridge; his

unrequited attachment for Miss Chaworth (whose father had been killed by Byron's uncle), to which he ascribed his unholy life in part; his unsuccessful attempt to enter upon a political career; his unhappy marriage with Miss Millbanke; his efforts in aid of Grecian liberty; and, in general, his dissolute and adulterous life. He died April 19, 1824.

Other poems written by him are "The Giaour," "The Corsair," "The Prisoner of Chillon," "Childe Harold's Pilgrimage," "Mazeppa," etc.

2. *Dream* (last word in first line), should have the rising inflection (pause of suspension); *extinguished* should have the falling inflection (sense completed); *space*, if any inflection, a rising one; and *pathless*, a falling inflection (completion of sense).

4. A correct oral reading of a paragraph requires that the voice shall be so controlled as to develop all the thought of the selection. If the thought is not known, or, if known, is not fully comprehended, it can not be accurately expressed in speech. Hence the importance of requiring pupils to make a thought analysis of their reading lesson before giving it orally. All clear conceptions and intelligible expressions are based on accurate knowledge.

6. The alphabet method of teaching reading may begin with the first letter of the alphabet, and teach it and others to the child in a routine way by names; or it may begin with the simplest forms, as those of one straight line, of two straight lines, etc., of curved and straight lines, etc., and proceed gradually to the most difficult; or it may begin with the forms already known to the child and lead gradually to the unknown. In each case, after the letters are learned, it is usually followed by arbitrary combinations in which the name of the letter as learned and its sound are entirely different. Of course there are various ways of overcoming part of the routine by getting the children interested, such as using dissected letters, letters on blocks (a full set being in each child's hands), to be hunted up and compared with the one on the board or chart, etc.

Some of the objections to using the alphabet method are, (a) that the letters are isolated and the child sees no object to be gained in learning them; (b) that the name of the letter as learned and its sound as used are rarely alike, and hence the child is misled; (c) that the combinations that must follow this method in order to substitute *sound* for *name* (such as f-a fa; f-e fe; f-i fi. etc.), are extra and unnecessary work for the child; (d) that words learned by rote in the spelling or reading lesson generally have no ideas associated with them, and hence are useless to the child for speech.

That many of these difficulties have been and can be removed by skillful expedients is true, and hence the alphabet method should

not receive the wholesale and unqualified denunciations sometimes showered upon it.

GEOGRAPHY.—1. Nearly that of a sphere. The following facts prove the spherical form of the earth: When a ship sails from us, anywhere and in any direction, on the ocean, the lower parts of the vessel first disappear from view, then the lower parts of the masts, then their tops; in an eclipse of the moon the shadow is always round; the various measurements taken upon its surface, in different countries, prove its spherical form.

2. Capital—the chief city of a country; Capitol—the edifice occupied by the Congress of the United States. In some states this term is applied to the State House. Metropolis—the chief city of a kingdom, state, or country. Republic—a form of government in which the people choose the persons who carry on the government. Monarchy—a form of government in which the ruler, or monarch, holds his place by virtue of his birth.

3. The Eastern States that border on the ocean are: Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut.

4. (1) They attract clouds, condense moisture, store up reservoirs of water received from them, and send it forth again in streams, to fertilize the soil. (2) They increase the surface of the earth, giving variety to its vegetable productions. (3) They exert an influence on the climate. (4) The upheaval of the lower strata has brought the rich mineral treasure within reach.

5. Scotland, Wales, England, France, and Spain.

6. Norway and Sweden.

7. From Northeast to Southwest. Fort Wayne, Indianapolis, and Evansville.

8. Continental Islands are those which lie near the continents. They are usually long and narrow, and follow each other in the direction of their length. The other class are Oceanic Islands.

9. In the eastern part. On account of the water power afforded by this part of the United States.

10. Wheat, pork, coal, tobacco, agricultural implements.

PHYSIOLOGY.—2. The delicate mucous membrane lining the bronchial tubes is very sensitive and easily irritated. Very cold air, or air rendered impure by dust of any kind, has a tendency to produce inflammation of the membrane; but if the air be warmed or its dust be removed by the nostrils, much of its power to do injury is removed. In addition, the nose perceives the odor of injurious substances more readily than the mouth. Hence it is better to breathe through the nose than through the mouth.

5. Nature usually affords protection in proportion to the importance and the delicacy of the part protected. The nervous centers,

being the life centers and the regulators of the other parts of the human mechanism, are hence most carefully guarded against injury. The chest and abdomen are less rigidly guarded because injury here is not so dangerous and because the contents of these cavities require freedom of motion in order to the performance of their functions.

6. The systole of the left ventricle of the heart sends a wave of blood along the arterial channels, whose force is somewhat augmented by the elasticity of the arteries. The striking of the successive wave crests are termed *beats* of the pulse. By the intricate movement of the blood in the mesh of capillaries these waves are largely broken to pieces, and hence, when the blood passes on into the veins, the beats of the pulse are no longer felt, though the *vis a tergo* of the heart is not entirely lost.

7. Thirst is apparently located in the throat, and hunger in the stomach, as the respiratory sense is located in the lungs, though of course these are conditions of the general system. A poverty of nutriment in the blood makes itself known at a certain point in order that there may be no mistake in furnishing a supply of the material needed.

9. The semi-solid chyme passing from the stomach into the small intestine is strongly acid. It contains starch not acted upon by the ptyalin of the saliva, such sugars, salts, and peptones as have not been absorbed in the stomach, fat minus its cell-walls, mucus, and indigestible substances. Two alkaline juices are immediately poured in considerable quantity upon this mass (bile and pancreatic juice), and a third in course of procedure (intestinal), changing it from an acid to an alkali.

The pancreatic secretion helps to change starch into sugar, acts upon albuminoids not already acted upon in the stomach, and emulsifies or saponifies fats. The bile aids in the absorption of fats, stimulates the intestinal canal, destroys the acidity of chyme, and emulsifies fats (questioned). The use of intestinal juice is not yet fully understood.

PENMANSHIP—1. The small *t* is composed of the right curve, slanting right line, horizontal straight line. The small *t* right curve, left curve, and straight line.

2. Slant, height, spacing, and form. Form of letters, which embraces first, second, and third, is most important.

3. *i, u, n, m, x, v, w—o, a, c, e, r, s—t, d, p, q, h, k, l, b, f—j, y, g, s.*

4. It assists in acquiring a correct conception of the forms to be written.

5. A space in height is measured by the letter *i*.

HISTORY.—1. The principal islands of the West Indies, and the mainland of South America, near the mouth of the Orinoco.

2. Because Columbus thought the land discovered was a part of the East Indies.

3. In 1619 or 1620 the commander of a Dutch trading vessel brought twenty negroes to Jamestown, Va., and sold them to the inhabitants.

4. Texas was formerly a part of Mexico, but in 1836 the Texans revolted from the arbitrary rule of the Mexicans, and established an independent government. In 1844 they petitioned to be annexed to the United States.

This question of annexation formed the main issue of the campaign of 1844, and was the cause of the war with Mexico. Texas was annexed to the United States in 1845.

6. Thomas H. Benton was a distinguished American statesman, who represented the State of Missouri in the United States Senate from 1820 to 1850. He was the author of a voluminous work upon the "Workings of the United States Government," and an "Abridgment of the Debates of Congress from 1789 to 1856." He died at Washington in 1858.

7. The hope of finding a western passage to India; religious persecution in the Old World; the desire to amass great wealth; love of adventure; the design of planting colonies.

8. English, French, Spanish, Swedes, and Dutch.

9. Washington, Alexander Hamilton, and John Adams.

10. During the War of 1812, a British force landed on the west coast of Chesapeake Bay and marched to Washington, meeting little resistance on the way. They burned the capitol and most of the other public buildings, and then retreated, August, 1814.

GRAMMAR.—1. He is the most remarkable man *who* the present age has produced, should be—*that* the present age has produced.

That is a relative pronoun, third, singular, masculine, to agree with its antecedent *man*, objective case, and object of the verb *has produced*. It likewise connects the clause in which it stands to its antecedent.

8. He is to be married to I do not know whom, is a complex, declarative sentence. *I do not know* is the principal clause; *he is to be married to whom* is the subordinate. *I* is the subject of the principal clause; *do know* is the predicate, modified by the adverb *not*, and the subordinate clause as object. *He* is the subject of the subordinate clause; *is to be married* the predicate, consisting of *is* the copula and *to be married* the attribute. The attribute is modified by the adverbial phrase *to whom*, in which *to* is the preposition and *whom* the object.

MISCELLANY.

✓ *The Teachers' Guide*, of Cleveland, O., after completing its eighth volume, has "turned its heels to the daisies."

U. C. College has more students in attendance the present term than at any corresponding term for the past ten years. The new president, E. Mudge, is giving excellent satisfaction.

NEWTON COUNTY.—The Newton county teachers will hold an association at Kentland, Feb. 16th and 17th. An excellent programme has been arranged, and a large and profitable meeting may be expected.

✓ Mrs. A. T. Stewart, of New York, is building a new college in that city to cost \$4,000,000. It will be the largest in America, non-sectarian, co-educational, and expenses will be put at a low figure. So says an exchange.

RIPLEY COUNTY.—The teachers of this county held their first annual "session" January 1st and 2d, and had a profitable time. We speak advisedly when we say "everything is moving smoothly in 'Old Ripley.'" Thos. Bagot still holds the reins.

WARSAW.—The public schools of Warsaw, under the direction of Supt. John P. Mather, gave two entertainments Dec. 21st and 22d, in the Opera House, "for the benefit of the library." They were a success in all regards, and valuable additions will be made to what was already a good beginning for a school library. *Enterprise*.

RUSH COUNTY.—The manual for 1883 is tastefully arranged and printed, and its contents compare favorably with the best manuals that have reached our table. It gives all the information that a teacher or resident of the county could desire on local educational matters. The notes on course of study, and outlines of township institute work are full and helpful.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.—This association will meet at Washington. April 4th, 5th and 6th. In addition to the ordinary programme, it is proposed to make an "exposition of school work." The time is very favorable for a good display, being about the close of the district winter schools, and after the town and city schools have completed two terms. Every school, whether in city, town or country, can prepare something, and the expense of sending it, if the teacher does not attend, will be but a trifle. This ought to be made a large and profitable meeting. For full information address the chairman of the executive committee, D. E. Hunter, Washington.

MADISON COUNTY.—County Supt. Croan has adopted the plan of graduating pupils from the district schools. He has sent out rules for conducting examinations and made suggestions as to appropriate public exercises. He offers a "medal of honor" in pure gold, worth \$20, to the pupil reaching the highest percent in the final examinations. The determination to make the undertaking a success is manifest in every paragraph of his circulars. There can be no question as to the beneficial results of these graduating exercises upon both pupils and parents, if conducted in a proper manner. They should be held in every county.

DELAWARE COUNTY.—The teachers of Delaware county held their institute in Muncie on Thursday and Friday of the Holiday week. The meeting was large, and judging from the report in the papers, very enjoyable. It was on a new plan for a county institute, and seemed to work well. Each trustee made a report of the work in his township. The following resolution, among others, was adopted:

Resolved, That as teachers we will do more to encourage the reading of good books, newspapers, and magazines, and to this end will use one reading recitation per week, having the pupil to give extracts or tell something he has read; and further, that we recommend a reading table in every school room.

STATE NORMAL SCHOOL AT TERRE HAUTE.

A day spent recently in the State Normal School developed the following information:

The school is *strictly* a normal school. It admits none who do not declare an intention to teach at least two years in the state. The *purpose* of the school is to make teachers and all the work is shaped to that end. It devotes more time to strictly professional study than does any other school in the United States. During the first year one hour a day is devoted to *observing* actual school work by model teachers. This observation is done, not in an aimless way, but methodically, one point at a time, under the direction of a competent teacher. After an "observation" the class retires and the points are taken up, criticised, and discussed.

The second term is given more largely to the study of the *theory of the school*, a good model having been fixed in mind by the first term's observations. In the third and last term of the year the *theory* is put to the test, and the student is required to do actual teaching, which is kindly but closely criticised.

This, with a review of the common branches, makes a very profitable year's work.

All the work of the school is done from a psychological basis, and a valuable mental training comes with the study of each subject.

The recitation rooms of most of the teachers were visited, and with much satisfaction, but space will allow the mention of but two at this time as illustrative of the general work of the school.

A LESSON IN COMPOSITION

was given by W. W. Parsons, having for its special subject "Comparison and Contrast." The lesson was the first taken by the class on this form of composition, and was a discussion of the theory of the comparison and contrast of objects in discourse. The following were the leading points of the lesson :

I. *The mental process.*—To compare one object with another is to perceive the resemblances between them ; to contrast them is to discover their differences. Each of these processes involves the other. In knowing the particulars in which two objects are alike, the mind necessarily perceives in what respect they are unlike ; and in discovering their points of difference, the common qualities are observed. These are natural and fundamental activities of mind. They are involved in all thinking. An object is never *known* until its resemblance to other objects is seen, and it is contrasted with or set off from those which it is like. The form of discourse called comparison and contrast is based upon these facts in our thinking, and therefore prevails in all composition, especially in that which is addressed chiefly to the intellect.

II. *The purpose.*—In treating a subject by this form the purpose, ordinarily, is not to present the points of agreement and disagreement for their own sake, but to give a knowledge of the one object—the subject of the discourse. Its relations of agreement and difference are pointed out as means to the end. The unknown is to be communicated by means of the known. If the subject be Ohio, it may be compared and contrasted with Indiana in respect of area, surface, productions, etc., where it is the object, by this means, to give the knowledge of Ohio. The subject is single.

III. *The basis.*—The known object by means of which the new is presented is called the basis of the comparison and contrast. In order that the discourse may be effective, two things are necessary in choosing the basis : first, there must be positive points of agreement and difference between it and the subject ; second, it must be familiar to those addressed.

IV. The class were required to give suitable objects with which to compare the following subjects : South America, A Monarchy, Ancient Greece, The Executive Department of the United States Government, and others.

THE DEPARTMENT OF NATURAL SCIENCE

is under the direct charge of Eli F. Brown. It includes physiology, physics, chemistry, and botany; and lectures are given on mineralogy, geology, and astronomy.

The classes in physics and chemistry are instructed in these branches with special reference to the preparation of the students to teach them. Much attention is given to the exposition of the theoretical phase of the subject, and at the same time students are required to give lucid explanations of phenomena, and to accompany the whole with easy illustrative experiments. Students are incited to devise useful apparatus from common and inexpensive material—bottles, pans, tumblers, sticks, tubes, and other suitable things, are caused to do good service in working out both of the subjects.

The chemistry class visited was only two weeks old as a class. They began their work along two lines of study, (1) Observation of familiar chemical phenomena, and the performance of simple experiments; and (2) the mastery of the theory of explanation. On entering the recitation they were sent to the tables to perform exercises selected from the matter learned during the preceding lessons. The exercises were as follows:

1. Generate oxygen, test, and explain.
2. Obtain nitrogen from the air, show the relative amount, and explain.
3. Generate carbonic acid gas, test, and explain.
4. Obtain carbon, water, and carbonic acid gas from a burning candle.
5. Show the presence of carbonic acid in the breath, in the air, and as a result of combustion.
6. Reduce an oxide with the blow-pipe, and explain.
7. Purify water by filter, and by distillation, and explain.
8. Obtain carbon from a bone, and from wood, and explain.

Of the utility of such exercises there can be no question. By the end of 13 weeks a class will pass through Eliot & Storer's manual of chemistry and be able to explain anything in it with ease. This sort of scientific knowledge is tangible and profitable.

RICHMOND.—The missing of a train recently gave us an hour in the Richmond schools. Supt. J. A. Zeller is now in the midst of his second year's work as superintendent, and judging from all we could see and hear he is doing well. We looked into the rooms of several of the teachers, but did not stop long enough to form an estimate of the work done, except in a primary room taught by Miss Julia Test. Miss Test has a state reputation as a primary teacher, and deservedly so. Her work must be seen to be appreciated.

The Rose Polytechnic Institute, a school of practical science, located at Terre Haute, will be opened for its first class (25 in number), March 6th.

Prof. D. S. Jordan, of the State University, is planning to make another European trip the coming summer, and take with him a company, such as accompanied him two years ago.

SULLIVAN COUNTY.—The manual for 1882-3 is at hand and is unusually full. Its 82 pages give an exposition of the county work that is complete and satisfactory. It indicates that Sullivan is fully up in grading, township institutes, graduating from district schools, synopsis of methods in teaching the various branches, etc., etc. The report itself is an excellent one, but the paper, type, and presswork are miserable.

TERRE HAUTE.—A glance at the high school, numbering 280, was sufficient to show that the principal, W. W. Byers, is master of the situation, and that good order and good work are the "order of the day."

Fifteen minutes spent in a primary room taught by Mrs. Ellen D. Grover, made a pleasing impression. The room was beautifully ornamented, and a more cheerful company of little ones we have not seen for many a day.

The phonic work and the making of stories out of words learned were superior, and indicated skillful teaching.

Superintendent Wiley has a good hold of his schools.

THE TEACHERS' MUTUAL BENEFIT ASSOCIATION OF INDIANAPOLIS.

The teachers of the Indianapolis public schools have formed an association for protection in case of sickness. The plan is as follows:

Each teacher pays 25 cents initiation fee and 20 cents assessment each school month. The board of directors may double this assessment in case of necessity.

When prevented from teaching on account of her own sickness, she draws \$2 for each school day absent, after the third.

The officers, five in number, constitute the board of directors, and work without pay.

As a teacher ceases to be a member when she ceases to teach in the public schools of Indianapolis, the average No. of the members will remain about the same; and the expense will be about the same from year to year.

This is a step in the right direction.

PERSONAL.

Alex T. Reid has charge of the Dayton schools.

George Walter Dale, the elocutionist, has located at Ann Arbor, Michigan.

Joseph E. Haynes has been superintendent of the Newark, (N. J.) schools since 1849—34 years.

D. D. Blakeman has been elected superintendent of the Lebanon schools *vice* T. H. Dunn, resigned.

A. Whiteleather, a graduate of the State Normal, has been elected principal of the Edinburg high school.

C. E. Bickmore recently resigned the Connersville high school to take charge of the school at Cattelsburg, Ky.

Ira T. Eaton, agent for Clark & Maynard, is now making his headquarters at Room 74 Bates House, Indianapolis.

A. J. Johnson has been elected superintendent of Vermillion Co. *vice* H. H. Conley, resigned. His address is Gessie.

H. H. Conley, Supt. of Vermillion, having become prosecuting attorney for his district, has resigned the superintendency.

J. Fraise Richard, of Mansfield, Ohio, has been engaged to take charge of the Teachers' Department of the Island Park Assembly next summer.

H. S. Tarbell received many commendations for the manner in which he presided over the State Teachers' Association. He made an efficient president.

Eli F. Brown, of the State Normal, has been engaged to give a course of lectures on comparative anatomy and physiology in the Medical College of Indiana, at Indianapolis.

Col. H. B. Carrington, formerly Professor in Wabash College, and an author of some note, now has charge of one of the departments of A. S. Barnes's publishing house, in New York.

W. T. Fry has resigned the superintendency of the Crawfordsville schools to take an agency for Sheldon & Co.'s school books. His field will be Southern Indiana, with headquarters at Crawfordsville.

Mary A. Calhoun, one of the most efficient primary teachers in the Indianapolis schools, died of pneumonia January 25th, after a brief illness. She had been connected with the schools since 1877, all the time in one room. She was loved by her pupils, respected by her patrons, and thoroughly trusted by the school authorities.

A. W. Brayton, teacher of natural science in the Indianapolis high school, has been seriously ill for a month past, and is only slightly better at present. He has the sympathy of a large circle of friends.

Jas. C. Greenough, principal of the State Normal School of Rhode Island, has been elected assistant superintendent of the Boston schools, to take the place made vacant by the resignation of Colonel F. W. Parker.

David Graham, who was superintendent of the Rushville schools so many years, is now conducting a private school in a building of his own, and is doing well. His many friends will be pleased to hear of his success.

D. Moury, formerly of this state, and well known to many of the Journal's readers, recently read a paper before the Tennessee State Teachers' Association at Nashville. His subject was "The Physical Effects of Alcohol."

James H. Smart, ex-State Superintendent, of Indianapolis, and Hon. Robert S. Robinson, of Fort Wayne, have been appointed to fill vacancies in the board of trustees of the State University. Two excellent appointments.

H. B. Morse has resigned the principalship of the Edinburg high school on account of ill health. He is an efficient and popular teacher. On his last day in school, his pupils presented him with a complete set of Irving's works.

E. P. Cole, one of Indiana's pioneer teachers, who was one of the active agents in establishing this Journal, and who has been a leading and highly respected teacher till within a few years past, is now successfully conducting a bookstore at Bloomington, Ind.

Dr. J. B. Reynolds, formerly a teacher at New Albany, and well known in Southern Indiana, and who is now connected with the Book House of John P. Morton & Co. of Louisville, recently read a paper before Kentucky State Teachers' Association on the late Prof. Noble Butler. Those who know Dr. Reynolds will know that his paper was complete and exhaustive.

Prof. C. R. Barnes, of Purdue University, was married on Christmas night to Miss Mary K. Ward, daughter of W. L. Ward, Esq., of La Fayette. Miss Ward was formerly Secretary of the La Fayette School Board. The happy couple were the recipients of many handsome presents from friends, one specially noticeable being a beautiful silver service of eight pieces from Prof. B's associates in the University Faculty. Prof. B. is one of the most promising young men of his age in the state, and we wish him and his good wife many pleasant years together.

BOOK TABLE.

✓ *Empirical and Rational Psychology, embracing Cognitions, Feelings, and Volitions.* By A. Schuyler, LL. D. Cincinnati: Van Antwerp, Bragg & Co.

Year after year there is a greater demand for critical study on the part of educators. They need to study not only the subjects, but the mind to which the subjects are to be adapted. To any one who desires to know the facts and laws of mind, this book is commended. Dr. Schuyler is not unknown to fame, being the author of a *Logic* and a series of higher mathematical works. He is a close, clear thinker.

"How charming is divine philosophy!
Not harsh and crabbed, as dull fools suppose,
But musical as is Apollo's lute,
And a perpetual feast of nectared sweets,
Where no crude surfeit reigns."

/ *Eclectic Short-Hand.* By J. Geo. Cross, A. M. Chicago: S. C. Griggs & Co.

A book of about 200 pages, printed in a clear type. The writing from which the plates are photographed was written with the pen at a rate of from 150 to 200 words per minute, thereby making the plates samples of a natural reporting style.

There are less than thirty-five signs used. All letters are either oblique or horizontal, making the movements more like those of long-hand.

It will pay any one desiring to learn short-hand to examine this little book.

Graded Instruction in English, for the use of Teachers. By Orville T. Bright. New York: D. Appleton & Co. C. E. Lane, Chicago, Western agent.

This is a *little* book of only 8 pages, for the use of the teacher. The leading thought of the author is that children need *practice* and not *reasons* in acquiring the use of the language. To this end he takes up point after point in which mistakes usually occur and drills, drills, drills. The great bulk of mistakes is limited to a comparatively few words and expressions, and the point is to correct them by practice. This is the best little book for the teacher that has yet come to our notice. It is full of practical suggestions.

Sheldon's Modern Fifth Reader. New York: Sheldon & Co. Cyrus Smith, Indianapolis, agent for Indiana. pp. 475.

The above book is just out, and completes the series. The selections have evidently been made with a great deal of care. They possess literary merit that makes them worthy of close study as spec-

imens of good English. The pieces that are not new are such that never grow old. Modern writers are well represented in their choicest productions. The model analysis of a few specimen pieces will aid both pupil and teacher in making a proper study of a lesson.

This book is worthy of its predecessors, and all together completes an excellent series of Readers.

The Arkansas School Journal has given place to "Kellogg's Eclectic Monthly," which is to have an educational department. The new Eclectic looks well and deserves patronage.

The Popular Science Monthly, published by D. Appleton & Co., of New York, is what its name indicates. It is not confined strictly to *science*, as the word is ordinarily used, but treats social and other questions in a scientific way. As its treatment of subjects is not technical but popular, it is the best paper of its class for the *unscientific* reader, and yet it is always up with the latest and best scientific theories.

The Christian Union has recently contained able articles on Temperance, by ex-Governors Long and Claflin, of Massachusetts, John G. Whittier, and Henry C. Potter, D. D.

Indiana Student, is the name of the college paper published by the students of the State University. Its editors are C. L. Goodwin and W. J. Bryan. In addition to the local and college matter, the January issue contains several articles of literary merit. The paper is entirely free from slang and personal puns(?) so often found in such periodicals. It ranks high among college papers.

BUSINESS NOTICES.

If you wish to raise a club for the Journal, write for terms to agents.

Large set samples of our New School Aids, pretty Reward Cards, School Reports, etc., all new designs, to teachers for 15 cents. Stamps taken.

2-6t

PHOENIX PUBLISHING Co., Warren, Pa.

Every teacher in the state should enter the WORD CONTEST advertised in this issue by Rand, McNally & Co., of Chicago. It will do you good, and you stand a good show of getting a prize. Try it.

Attention is called to the advertisement of "Smart's Commentary on the School Law." The book is one that should be in the hands of every teacher and trustee. The commentary covers the entire law, and will help to settle questions that continually arise. Mr. Smart is without question the best school-law lawyer in the state, and therefore his opinions are valuable. See the advertisement, and then address Wm. B. Burford, Indianapolis.

WANTED.—Township Trustees to correspond with us directly with regard to supplying their Schools with The People's Cyclopedia.

1-tf

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SPECIAL NOTICE TO TEACHERS.—The People's Cyclopedia being in special demand among Teachers, we wish to state that teachers may order of us the Cyclopedia direct, and make three monthly payments.

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1500 **QUESTIONS IN GEOGRAPHY, WITH ANSWERS.** A book for teachers, furnishing excellent REVIEW DRILL for classes. Questions mostly from State Board Examinations. In book form. Price, 50 cents.

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[10]

C. A. FYKE, Hicksville, O.

GRADED MONTHLY SUPPLEMENTARY READING.—Fresh every Month.—Adapted to any Readers.—A New Departure in Teaching Reading. By ingenious devices it trains children to be wide awake when they read. Stimulating and helpful to teachers as well as to pupils. The leaves are very cheap and give the highest satisfaction. For 10 cents we will send ten copies (single issue) of either paper for trial in a 1st, 2d, 3d, or 4th Reader class, as may be designated, or samples of each grade. Save your postal cards. Enclose 10 cents and look for the papers by return mail.

E. O. VAILE,

12-4

Oak Park, Chicago, Ill.

CONSUMPTION CURED.—An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all Throat and Lung Affections; also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send, free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this journal, W. A. NOYES, 149 Power's Block, Rochester, N. Y.

12-6

School Desks & Apparatus

Our celebrated Triumph Dovetailed Desks, both stationary and folding-lid, continue to take the lead. Fully guaranteed against getting loose or broken.



TRIUMPH STATIONARY TOP.
night sun, twilight belt, etc., etc.

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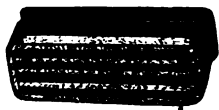
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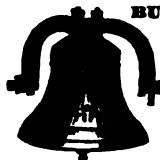
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INDIANA " SCHOOL JOURNAL.


Vol. XXVIII.

MARCH, 1883.

No. 3.

RELATIVE VALUES OF DISCIPLINE AND INSTRUCTION IN THE PUBLIC SCHOOLS.

W. F. YOCUM, PRESIDENT FORT WAYNE COLLEGE.

T is said that the ancient natives of the Balearic Isles trained their children from early infancy in the use of the sling. The portion of food which was intended for each child's breakfast was placed beyond his reach on the limb of a tree, and the child was required to bring it down with a well-slung stone or go hungry.

Day by day the food was placed higher, and so a greater strength of muscle and more steadiness of aim was required to reach it. The exertion of the child was rewarded in two ways; he gained food for his hunger, and he gained strength of arm for other achievements.

The food typifies *knowledge*; the acquisition of strength and steadiness is discipline.

A boy studying surveying is required to solve the following problem: *To divide a triangular piece of ground into two equal areas by a line parallel with the base.* After suitable effort the boy succeeds, and derives a formula which will apply to all cases. By it he can survey fields, and thus earn money, and please his friends, and serve his employers. He can also use it to aid him in the solution of more difficult problems, which in turn will be increasingly useful.

One product of the lad's exertion is an *item of real knowledge*, possessing intrinsic value.

But another good has resulted. The powers of mind which he exercised in solving the problem have been strengthened by that exercise, so that he can solve another problem of equal intrinsic difficulty with less exertion than was required for this one. His knowledge also has been *rearranged*, and is now more readily accessible. His mind has been disciplined to some extent.

By *Discipline* in this discussion is meant the training, or strengthening of the mental powers.

By *Instruction* is meant the causing to acquire useful knowledge.

By the public schools are meant all grades of schools sustained in part or wholly by the state, whether primary, secondary, or superior.

The question, then, before us, is this: Which is the more valuable educational product, discipline of the mind, or knowledge, and in what ratio is one more valuable than another?

Now it would on first sight seem fair to assume that education ought to aim at both these results: it ought to increase knowledge and it ought to afford discipline. It would at first sight seem *cruel* to keep a young boy day after day shooting at objects beyond his reach, which when at last he should bring them down should prove to be only stones, hard, insoluble, unpalatable, indigestible stones. The boy needs food. His muscles, though at first strengthened by the exercise, would soon shrivel and wither for lack of nourishment.

On the other hand it would be equally unwise to surfeit the lad with food without requiring also a suitable amount of exercise. His muscles would grow soft and his strength decay.

On this question the whole educational world may be divided into two great classes, *humanitarians* and *utilitarians*. Humanitarians agree in thinking that the object of education is to make *men as men*. The school should not aim to make merchants, clerks, shoemakers, dressmakers, milliners, lawyers, and preachers, but men and women, with all the powers of the soul harmoniously and fully developed and trained into right habits of activity.

Utilitarians claim that the object of education is to make good farmers, mechanics, and merchants. "Let the boys learn what they will practice when they become men," is their motto. What is called a liberal education is entirely discarded. Let children for themselves, or their parents for them, decide early what pursuit in life they shall respectively follow, and then let everything bend to preparation for that. Of course they must all learn the three R's, but after that let the education be specialized.

At this point the utilitarian school divides into two branches. Some would send the boy from the primary school at once into the shop, or the field, or the store. If the boy is to be a machinist, let him go into the machine shop and learn the trade; if he is to be a merchant, let him go at once into the store and work his way up. Others would allow a more extended course of instruction, but it must be in special schools of technology. The characteristic of the utilitarian theory is that each individual should be educated from an early age for some special bread-getting occupation. This theory ignores discipline altogether, and values knowledge, not for itself, but as a means to a material end.

This view of the object of education is quite prevalent. Concealed under one disguise or another it permeates society. It is a popular theory, but not the theory of enlightened people. It is not endorsed by any considerable number of educationists, and so may be dismissed with the statement of two objections:

1. It is not adapted to the conditions of society advancing in civilization. A man educated for a single line of work can not readily change to any other. The invention of a new machine, a glut in the market arising from over-production, too much rain or too little rain, or one of a hundred other unforeseen causes may throw him out of employment and into starvation.

2. It curtails the pleasures of life. Education opens the windows of the soul and lets in beauty and enjoyment. The more education the more pleasure.

Dismissing this extreme view that knowledge, and that of a very narrow kind, is the only end of education worth seeking,

let us examine the various shades of opinion held by the humanists, and determine, if possible, the relative values of discipline and knowledge. There are obviously three cases remaining:

First, Discipline is the *only* end about which we need concern ourselves.

Second, Discipline is *far better* than the acquisition of knowledge; the latter is good, but quite a secondary matter.

Third, Discipline and the acquisition of knowledge are of *equal importance*, or so nearly so that they ought both to be sought with our best efforts.

Of the first opinion there are few advocates; still there are some. The University of Cambridge, England, is the organized exponent of this theory. Let us choose such studies as have the least possible connection with the affairs of practical life, and teach them in such manner as to exact the greatest possible amount of labor from our pupils. No matter if these studies are distasteful to the pupil; that is rather an advantage than otherwise. The boys must learn that education is *work*, not *play*. As for knowledge of men and things they will get enough of that when they are out of school.

The game of chess is claimed to afford valuable mental discipline. Undoubtedly it does afford a discipline, valuable or otherwise. Undoubtedly, also, other games could be devised which, when combined and diligently practiced, would call into vigorous exercise all the powers of the mind. Now suppose a lad to be taken at a tender age and set to learn these various games. After fifteen years of constant practice it might be supposed that this boy would be *educated*! The very statement of such an hypothesis shows its absurdity. The boy would be starved. If not by the end of his course of study a driveling idiot, he would at least have to commence his education afresh to fit him for bare existence in a practical world. Yet this perversion of education is the legitimate result of the doctrine that education should aim only at discipline. Quotations might be multiplied to prove that this theory is actually held in some quarters, and an enthusiastic professor is said to have boasted that the favorite subject of his lectures could not "by any ingenuity be prostituted to any useful purpose."

Few American educationists would advocate a position so ultra as this, and we may pass on to state the position held by the second class of humanitarians. These hold a modified form of the doctrine just stated. They would not say that discipline is the *only* end of education, but that it is the *principal* end. The acquisition of knowledge is so much an incidental matter that the teacher may give himself no concern about it. All knowledge is useful enough. Studies should be chosen exclusively for their disciplinary value. There is no danger of mental starvation; all studies contain enough nutriment to feed the mind. Select such studies as the experience of centuries has proven to be the best for discipline, and pursue them by such methods as the experience of centuries has proven to be efficient for that end. The lad when he is through his education will be *ignorant*, it is true, so far as the practical affairs of life are concerned, but he will soon learn; he will have learned *how* to learn; he will have a disciplined mind. Toss him out, and if he does not strike on his feet he will soon get on his feet, and elbow his way to the front.

This theory commands respect from its antiquity, from the ability and standing of its adherents, and from the excellent results which such a course of training is claimed to have produced.

The theory is old, dating, in the form in which it still survives, at the latest from Sturm of Strasbourg.

Its advocates have been the large majority of scholars and educators in all countries. It is still the theory of the great educational centers of Europe, being more intensified in England than on the continent. It is the theory on which the old fashioned classical course, so-called, is maintained in most American colleges.

The results of the theory at first sight appear to have been good. Probably two-thirds of the scholars of the past three hundred years have been educated on this theory. If not true it appears to be near the truth.

Objections to this view of education have, however, been made, and some of them may be rehearsed here:

First, the fact that this theory has long been the prevalent theory of education is not conclusive in its favor. The history of progress is the history of the overthrow of long prevalent theories and prejudices. The science of education is receiving increased attention, and it would be strange indeed if no positions held for centuries were found untenable.

Besides, the theory in question has never been the only one. Others have coexisted, and it would be difficult to frame at the present day any system of education which had not by piecemeal been advocated before.

Again, perhaps the opinions of all that large body of illustrious scholars who pronounce in favor of the current system of collegiate instruction ought to be received with some caution. Having been educated in this way, they may possibly be unconsciously biased in favor of it. To oppose the system that fostered their intellectual infancy seems like cursing the mother that bore them.

Second, the fact that the current system of education has produced good results is not conclusive in its favor. No other system has been fairly tried. When the same amount of money and labor shall have been expended in educating the world on some other system, perhaps equally good results may be reached. In fact we ought to hope for vastly better results, for it may fairly be doubted whether the gross results *are* good. We know that a large proportion of the students who graduate are uneducated. If they ever come to the surface after leaving college it is because they have educated themselves subsequently. The Rector of Lincoln College, Oxford, estimates the proportion of students who get no benefit from the apparatus of instruction so high as 70 per cent. of the whole membership, and the commentary is made that if the manager of a cotton mill should report to the proprietor that his machinery was capable of converting only 30 per cent. of the raw material into cloth, and that of a very inferior grade, while the remaining 70 per cent. were scattered abroad in the form of infectious rags, the proprietor might reasonably conclude to try a different sort of machinery. Of course this illustration will not serve as an argument, for two reasons: First,

not all the material that goes into the university will be capable of making scholars; second, the poor results may be the fault of the administration rather than of the theory. Still a wide-spread dissatisfaction is felt at the inadequate results of the old classical curriculum.

Again, multitudes of the best men of all nations have been produced without the aid of the current system. The list of self-educated men, so-called, is so long, and the names so illustrious that it would be hard to match each one with a name equally bright from the ranks of classically educated men.

Third, the assumption that all studies are nutritious is undoubtedly true. All studies do contain, in some parts at least, some useful knowledge. But in some of the studies pursued in the schools the amount is painfully small—too small for the generous development of the pupil. Men have been lost on the mountains and have subsisted for days or weeks on barks, roots, mosses, and an occasional berry, but the amount of nourishment they obtained was altogether inadequate to the amount of exercise required of them in reaching the settlements. So scholars may subsist intellectually on the meagre diet found in the purely disciplinary studies which a few years ago monopolized the time of a college course, but they are not generously fed by any means. Modern American high schools and colleges have appreciated this fact sufficiently to furnish the student aspiring to scale the mountains of knowledge with a lunch-basket containing a few fragments of science and literature. I presume that a majority of those present to-day have been educated on the lunch-basket system, the great staples of their instruction having been the classics and pure mathematics.

Fourth, the assumption of this theory that a man will succeed better in the labors of life because he has spent several years in the study of things which have no direct relation to those pursuits is, to say the least, difficult to support. The indirectness of the education thus provided is a vice. The utilitarian is wrong in narrowing the education and shortening its time, but the advocates of the system in question, namely, the classical course of our colleges and the courses of our high schools preparatory thereto, go too far the other way.

- * {An assertion like the following is often made: Take two boys of fourteen years of age and of equal ability. Put one of them in a store and send the other through college. At the age of twenty let the latter enter the same store, and in ten years he will outstrip the other in his knowledge of the business and in his serviceableness to his employer. This statement is made to justify the practice of spending six or seven years in the study of Greek, Latin, and Mathematics. Admitting the results as claimed, the inference desired does not follow. The ultimately successful boy was *educated*, the other was not. Of course education, though not of the best description, is better than none. But had the boy been educated for the same length of time and with equal care on subjects more directly related to his life-work, he would have been more successful still. Can it be that the study of Greek will fit one better to be an engineer than the study of the sciences on which engineering is based? And are there not enough of the sciences which bear on engineering to occupy his time as long as he can afford time to study? Will seven years spent in the study of the higher mathematics make a better lawyer than seven years spent in the studies more directly related to law?

Fifth, the indirectness of this method of education tends to squander mental force. Each individual has a certain amount of vital force or nervous energy, which can not be sensibly augmented, but which can be spent. Is it wise to spend so much of it in discipline alone? Can we afford to play spendthrift with our vital forces? If a man should have a capital of \$100,000, and designing ultimately to engage in the iron manufacture, should first build a saw-mill, and then a flouring-mill, and then a cotton-mill, and after spending thus a third of his fortune should leave them to rot down, arguing that it was the experience that he wanted, and that such a course was the best possible preparation for the successful conduct of the iron manufacture, we would say he was a fool.

Only one other supposition remains as to the relative values of the two educational products in question. By keeping in view the *equal* importance of discipline and instruction, we shall

avoid on the one hand the narrow and insufficient education of the utilitarian, and on the other the vicious indirectness and wastefulness of the ultra humanist. While agreeing with one party that a fully developed and symmetrical character ought to result from a good education, we agree with the other party that only the most practically useful studies should be the staples of instruction. In acquiring the best knowledge we also acquire the best discipline. In the words of the most suggestive of recent writers on the subject of education, Herbert Spencer, "It would be utterly contrary to the beautiful economy of nature if one kind of culture were needed for the gaining of information and another kind were needed as a mental gymnastic. Everywhere throughout creation we find faculties developed through the performance of those functions which it is their office to perform; not through the performance of artificial exercises devised to fit them for these functions. The education most valuable for guidance, must at the same time be the education of most value for discipline."

In *framing a course of study*, then, almost exclusive reference should be had to the character and amount of knowledge contained in the studies proposed, discarding entirely such as have only a disciplinary value, and apportioning time to the others in the order of their usefulness as knowledge-giving studies.

But when a course of study has once been adopted, exclusive and intense attention should be paid to the methods of instruction employed, so that these studies may give the greatest possible discipline.

To the great mass of teachers the subject-matter of studies is of less importance than the methods of teaching, but to the few whose duty it is to provide for our public schools a judicious curriculum the greatest importance attaches to the relative intrinsic values of different proposed studies.

When this principle shall have gained the consideration it deserves, to discuss the relative values of discipline and instruction will seem as foolish as to debate the relative values of air and water, both absolutely essential to life and growth.

THE ELEMENTS OF GOVERNING POWER—I.

BY E. E. SMITH.

THE VINE AND ITS BRANCHES.

DRIPPING into the little chapel by the wayside one Sunday morning several years ago, I heard the good minister give a brief talk upon the parable of the vine. It set me to thinking; and when, a short time afterward, I stood beneath the overspreading and thickly woven branches of a magnificent grape vine, enjoying its grateful shade and luscious fruit, the striking resemblance of the vine to the teacher impressed itself upon me.

1. *The vine is cultivated for the fruit it bears.* The school is supported for the good it does. And the teacher is the school. Boards of trustees may build school-houses and furnish apparatus—but they can not build schools. This can only be done by the living teacher in whom the lamp of learning, like the sacred fire of Vesta, is ever burning, so that the pupils may rekindle their own lamps and catch the glow of his upon their faces. Not alone a guide, the true teacher is an inspiration. Like the star that appeared to the shepherds of Judea, whilst he points the way his own genius lights it in part, and the minds of those following ever look forward to higher things. The school with him is a means, not an end. He lives in deeds, not years. The seeds of love, truth, honor, patriotism, faithful labor, sown broadcast by him, develop manly men and virtuous women. The community and the state feel safe because of the purity, integrity, and intelligence he has produced. He is loved and respected because of his usefulness.

I am not of those who believe that recent criticisms upon the public schools arise from a lack of appreciation of the teacher or of his work. Like froth upon the surface, which often hides the valuable substance underneath, these criticisms are merely superficial, hiding from sight a strong, earnest, fully-grounded belief that the school system is the safeguard of the republic.

The criticism is not an evidence of hostility—merely an expression of the fact that the *real* and the *ideal* work of the public school are not the same. The child is the crude material. The citizen is, or ought to be, the refined product of the teacher's skill *and* the vicissitudes and emergencies of life. People who criticise generally forget this second factor of the product. Or, under another figure, the child is the germ. The school is the hot-house. The teacher is the florist. Now, if not enough of the fresh, busy, earnest air of the outside business world is let in, the growth is abnormal. Public sentiment is merely the test brought to bear upon the plan of cultivation, awakened by experience with the grown up plant. The desire for the best results is an evidence of interest and abiding faith in the schoolmaster and his work.

2. *The fruit is borne through the branches.* The teacher's work lives in his pupils. In the halls of knowledge he inculcates principles and motives; in the world, these materialize into tendencies and actions. "Like master, like man," says the old adage. Like teacher, like taught, is equally true. The teacher may build for time, for eternity, or for both. If he builds for either of these alone, his pupils are one-sided. Their development lacks symmetry. In short, they will become either "cranks" or tramps. The world does not need such growths. It is better off without them. It will fight shy of the teacher that produces them. A tree is known by its fruit.

3. *Sap from the vine keeps the branches vigorous.* The spirit of the teacher is the spirit of the school. If he be earnest, zealous, kindly in spirit, filled with a broad-hearted, generous humanity, scorning to descend to subterfuge or to be guilty of littleness in thought or deed, persuasive but firm in the right—if, in short, his government be the government of the just and the merciful, there can not be other than a healthful tone imparted to the school. This healthful tone means much:—it means that the personal force of the teacher is expanding, ripening, and fixing the best elements in the individualism of each pupil. Evil dies out from simple starvation. There is nothing that tends to call it into play, and nothing for it to feed upon if it is called

into play. The popular spirit of the school is the spirit of right, of manly and womanly culture, of a self willed submission to rightful authority and an instinctive condemnation of that which disturbs the peace and harmony of their little republic.

Such a school-conscience goes beyond the four walls of the recitation-room. It becomes the regulating element of that life-conscience which controls intercourse between man and his fellow in the broader relations of citizenship.

4. *The vine does not die, or cease bearing, early.* In Hampton Court, parish of Middlesex, England, we are told of a grand vine over two hundred years old, covering between two and three thousand square feet of surface, having a trunk three feet in circumference, and bearing at one time over two thousand clusters of sound grapes. Its roots stretched away under ground several hundred feet till they are now bathed in the ever-flowing Thames.

I have in mind a good woman who has been principal of the same young ladies' school for more than half a century. Faithful, tender-hearted, God-fearing, who shall measure the good she does while living or the blessed deeds through all the ages that shall owe their primal impulse to her?

The true teacher's influence does not cease with his nominal control. It becomes a perpetual reserve force and at the same time a stimulus in the social, moral, and intellectual life of his former pupil. The late President Garfield emphasized this thought in the declaration that "If Mark Hopkins were master in an old-fashioned log school-house, it would at once become a Christian University."

5. *The branches begin as buds and are easily killed off by neglect.* The pupils come into the teacher's hands as very plastic material. They are full of trust, but timid and diffident withal. To them there is no past. The future is everything. The world is a great mystery to them, into whose secrets of power and influence they are not only willing but anxious that some gentle and sympathizing hand should lead them. This is said with full knowledge of the terror that the first start to school excites in little children. That terror does not come from lack of interest

in what is done in the school-room, but from fear of her who presides over its labors.

Much has been written of the importance of the teacher's first day at school. What of the pupil's first day? How many remember distinctly that first entrance into school, and how the cold and austere or indifferent treatment of the teacher sent a chill over them which years could not entirely efface! How important that the first impression of school should be a pleasant impression; that the first feeling toward the teacher should be one of generous confidence; that the first thought of school life be, "There is something attractive in it"!

Richter declared, grandly but simply, "I love God and little children." The Savior of the world took children in his arms, declaring that "of such is the kingdom of heaven," and that "it were better for him that offended one of these little ones that a stone were tied about his neck and he were cast into the depths of the sea." The teacher learns here the lesson of a loving life and a living love. Every human heart has an angel in it as well as a devil. It is largely these first influences of another's life and example which decide whether the angel or the devil is to be banished.

6. *Pruning must be done.* The first thoughts here are of the florist's scissors, the surgeon's knife, the gardener's pruning-hook, and of the decaying apple in the barrel of sound ones. These things are sadly true as to their moral. When it does come to be necessary to take off the arm to save the body, it should be gently but unflinchingly done. It is neither just nor merciful to a large body of students to subject them to the dangerous example of a hopelessly vicious, immoral, indolent, or insubordinate pupil.

But in this matter, as in others in life, possibly our second thoughts are our best thoughts. Is it not possible to save this brand from the burning? Is there no way by which this unfruitful branch may be made fruitful? You have tried it, and failed. Your kindness, your patience, your forbearance, have not only not succeeded—they have been followed by abuse of your confidence, misconstruction of your acts, and even the ill-will of

him whom you had befriended. When you opened up your heart before God, did these upbraid you? If you have failed, have you not also succeeded? Have you studied faithfully Christ's parables of "the lost sheep," "the lost coin," and "the unproductive tree"? Christ's crown on earth was a crown of thorns; in heaven, every thorn has become a jewel of unfading glory.

The interlacing of the branches gives strength. A hearty, genial, friendly interest of each pupil in the other's success carries with it, of necessity, loyalty to the school and to its aims.

The vine is honored through its branches. What we sow, we shall reap. A man can not scatter broadcast the seeds of generous confidence, of good will to others, of a tender spirit toward the weak and erring, of a liberal hand toward those in need, of a broad, philanthropic public spirit, of self-sacrifice for the good of others, of a manly independence, of patient endurance under misfortune—one can not thus sow but what some of the seed shall yield a harvest in the fields of his own life. If one carry a lantern to light the way of friends amidst darkness and obstacles, will not some of the rays fall upon his own pathway?

But in another sense is the vine honored through its own branches. "A teacher who is for several years employed in his vocation, is often astonished at the rapidity with which the young, who come to him as mere children, grow up into men and women, and take their places on the stage of life as prominent actors. Some of them distinguish themselves in the arts; some become noted for their attainments in science; some receive the honors of office and become leaders in civil affairs; some gain eminence as professional men; and very likely a large proportion of them are engaged in the various departments of honorable industry. Wherever they are and whatever they are, they are now exerting a powerful influence in the community. They have grown up under his eye and have been essentially shaped by his plastic hand. He counts them as his jewels; and when he hears of their success, their usefulness, their honors, his heart leaps within him as he thinks, '*They were my pupils.*'"

Both vine and branches must have resources outside of themselves. Let us now turn our thoughts to a new phase of the subject.

[*To be continued next month.*]

PURDUE UNIVERSITY, Jan. '83.

TOBACCO-USING.

IN these days of temperance agitation, sight must not be lost of fundamental principles. The formation of intemperate habits is a gradual process, and may be classified as follows: 1. The primary grade, embracing the condiments of the table, given with most innocent intent. 2. The secondary grade, embracing the use of tobacco in its various forms. 3. The grammar school grade, embracing the moderate use of ale, beer, and wine—the moderate drinkers of society—the respectable (?) ones who claim to be strong enough to control themselves. 4. The high school grade, embracing all who have taken the highest degree and have become abject slaves of the habit—all who have gone down to the gutter and are wasting their substance in riotous living.

Along this line the great army is marching, and no true temperance reform can ever be established until recruiting for the primary grades is stopped. *Formation* is infinitely safer and more important than *re-formation*. It is better to establish good habits than to attempt to break up bad ones. Training and developing tender twigs is more successful than attempting to straighten knotty limbs and trees.

Teachers have an important work to do in this connection in forming good habits in their children. The tobacco department is the one with which they will be most deeply concerned, and the one which they should properly regulate. Let them by example and precept see that this flood of intemperance is stemmed. If they do this properly, the next generation will be largely a temperate one.

In this connection I give a report on this evil, submitted by

Hon. Horace Mann, the great American Educator, to the Ohio State Teachers' Association in 1856. Its ringing sentiments are commended to teachers and temperance lecturers everywhere as thoroughly sound.

J. FRAISE RICHARD.

MANFIELD, O.

“1. *Tobacco is highly injurious to the health*, being pronounced by all physiologists and toxicologists to be among the most active and virulent of vegetable poisons. That consumers of tobacco sometimes live many years does not disprove the strength of its power, but only proves the strength of the constitution that resists it; and that strength, instead of being wasted in resisting the poison, might be expended in making the life of its possessor longer and more useful.

2. *It is expensive.* The average cost of supplying a tobacco-user for life would be sufficient to purchase a good farm, or to build a beautiful and commodious house, or to buy a fine library of books. Which course of life best comports with the dignity of a rational being; to puff and spit this value away, or to change it into garden and cultivated fields; into a nice dwelling, or into the embalmed and glorified forms of genius? What a difference it would make to the United States and to the world if the four hundred thousand acres, now planted with tobacco within their limits, were planted in wheat or corn.

3. *Tobacco-users bequeath weakened brains, irritable nerves, and other forms of physical degeneracy to their children.* The factitious pleasures of the parent inflict real pain upon his offspring. The indulgences of the one must be atoned for by the sufferings of the other; the innocent expiating the offences of the guilty. Nor, in regard to those personal and hereditary injuries to the mind, would I stand merely upon the principle laid down by the physician who, when asked if tobacco injured the brain, replied promptly in the negative; for, said he, people who have brains never touch it.

4. *Tobacco-users are always filthy*, and we read of an infinitely desirable kingdom into which no unclean thing can ever enter.

5. *Tobacco-users are always unjust toward others.* They pollute the atmosphere which other men desire to breathe and have

a right to breathe in its purity. A smoker or chewer may have a right to a limited circle of the atmosphere around his own person, but he has no right to stench the air for a rod around him and half a mile behind him. He has no right to attempt a geographical reproduction of river and lake by the artificial pools he makes in steamboats and cars.

6. *A tobacco-user is the common enemy of decency and good taste.* His mouth and teeth, which should be the cleanest, he makes the foulest part of him. When one sees a plug of nasty liver-colored tobacco, he pities the mouth it is destined to enter; but when one sees the mouth he pities the tobacco.

7. *The old Monks used to prove the pollution of tobacco from Scripture;* for, said they, it is that which cometh out of the mouth that defileth a man.

8. It has been argued that the adaptation of means to ends which characterizes all the works of creation, intimates that snuff should never be taken; for, had such been the design of nature, the nose would have been turned the other end up.

9. It may be fairly claimed that if nature had ever designed that man should chew, or smoke, or snuff, she would have provided some place where the disgusting process could have been carried on systematically, and with appropriate accompaniments; but no such place or accompaniments have ever yet been discovered. Tobacco is unfit for the parlor; for that is the resort of ladies, and should therefore be free from inspissated saliva and putrid odors. It is not befitting the dining room, where its effluvia may be absorbed or its excretions be mingled with viands and beverage. Still less does it befit the kitchen, where those culinary processes are performed which give savor and flavor to all the preparations that grace the generous board. It should not be carried into the stable, for that is the residence of neat cattle, and the occupants of the sty itself would indignantly quit their premises should one more lost to decency than themselves come to perfume or bespatter or besnuff them. There is no spot or place among animals or men which the common use of tobacco would not sink to a lower defecation.

10. Swiftly tending to destruction as in the use of intoxicat-

ing beverages; vulgar, ungentlemanly, and sinful as are all the varieties of profanity; unjust and unclean as are the effusions and exhalations of tobacco, yet their separate and distinctive evils are aggravated ten-fold when combined and co-operating. How abhorrent to the senses of a pure and upright man, is the wretch who abandons himself to them all. Physiology teaches us that as soon as alcohol is taken into the stomach, nature plies all her energy to expel the invader of her peace. She does not wait to digest it and pass it away, as is done with the other contents of the stomach; but she opens all her doors and summons all her powers to banish it from her realm. She expels it through the seven million pores of the skin, through the lungs, mouth, nose, and eyes. To let tobacco be taken into the mouth or, drawn up water-spout fashion into the nose, and firemen never worked more vehemently at a fire, nor soldiers fought more desperately in a battle, than every muscle and membrane, every gland and emunctory, now struggles to wash away the impurity. Every organ, maxillary, lingual, libial, nasal, even the lachrymal, pour out their detergent fluids to sweep the nuisance away. Not a fibre or cellule, not a pore or sluiceway, but battles as for life to extrude the foul and fœtid intruder. Hence expectoration, salivation, the anile tears of the drunkard and the idiot drool of the tobacco-user—all attest the desperation of the efforts which nature is making to defecate herself of the impurity.

When people first begin to drink, or chew, or smoke, outraged nature, as we all know, often goes into spasms and convulsions through the vehemence of her conflict for escape. Finally she succumbs, and all that constitutes the life of a man dies before death.

The apostle enjoins his disciples to keep their bodies pure as a temple of the Holy Ghost. But in such a body, what spot is there, what space so large as a mathematical point, which the Holy Ghost, descending from the purity and sanctity of Heaven, could abide in for a moment? Surely, when a man reaches the natural consummation to which these habits legitimately tend, when his whole commerce with the world consists in his pouring alcohol in and pouring the impurities of profanity and the vile-

ness of tobacco out, he presents a spectacle not to be paralleled in the brute's kingdom or the devil's kingdom; on the earth or elsewhere."

TEACHING WRITING.

THOMAS BAGOT.

THE following are probably the principal criticisms to be offered on the methods of teaching writing at present in vogue in country schools:

1. The pupils are not supplied with the proper material.
2. They do not receive enough practice on preliminary work, including position, holding the pen, movement, etc.
3. They seldom possess a clear conception of the work they are required to do.
4. Letters are made as isolated individuals, and the importance of slant, relative height, and width, etc., is disregarded.
5. The work is not arranged in a progressive and systematic manner.
6. Mistakes are allowed to pass without correction until the pupils contract erroneous habits in writing.
7. Too much time is spent on the analysis of the letters and not enough in trying to make them correctly.
8. Slate work is carried to an extreme.
9. Neatness in the general appearance of the work, is too much neglected.
10. The use of engraved copies is carried too far in many schools.

I present substantially the method of teaching writing employed in the schools of this county at the present time, believing it to be in a measure free from the objectionable features named, and feeling that the good accomplished through it will justify me in putting it forward.

Every pupil upon entering school for the first time is required to bring a slate and long pencil. At the beginning of the second year, in addition to the slate and pencil, he must be supplied

with a writing book, scribbling paper, pen, ink, pen-wiper, blotter, etc.

After no small amount of drill on position of body, arm, slate or paper, pencil, etc., simple movement exercises are practiced, these gradually giving way to others less simple.

All copies are written upon the blackboard at first, the teacher constructing each form in the presence of his class and calling attention to the common errors made. The pupil soon builds the ideal form in his mind and strives to give his ideal conception a local habitation on the slate or paper.

The staff containing six horizontal lines about one-sixth of an inch apart, is ruled cross-wise at the top of the slate. The baseline is somewhat heavier than the others, and is thus the most prominent. A straight line is also drawn from the upper right-hand corner of the slate to the lower left-hand corner, by which to determine the slant of the letters.

The teacher begins the regular line of work with the straight line on the proper slant, and the pupils practice on this, and nothing else, until they can make it reasonably well. He then takes the right curve and treats it in the same way, after which the pupils practice uniting the two elements, and finally form with them the letters *i* and *u*, which they next practice writing together. The left curve is next taken up, and as soon as the pupils become moderately proficient in forming it, they are taught to combine it with the two elements already learned, in letters composed of the three, such as *n*, *m*, *a*, etc. Two or more of the letters learned are next combined into a word, as for instance, *in*, *an*, *am*, *man*, etc., and new words are formed accordingly as new letters are learned. At first it is best, perhaps, to allow these elements and letters to extend through two of the ruled spaces on the slates. Only one thing is attempted at a time, and this must be done satisfactorily before the next is presented for consideration. Some pupils who began writing three months ago can now write five or six short words, and they can write them well, too.

No mistakes are allowed to pass without correction. The errors are pointed out by the teacher, and the method

of correction generally given on the blackboard. It is much easier to avoid a bad habit than it is to get rid of it after it is contracted.

No attention is paid to analysis during the first year, and very little during the second. The pupils know the elements as mere forms, and see that letters are nothing more than combinations of them, but they know nothing about their names or their numbers.

During the first year the writing exercises are all on slates, during the second year about half of them are in writing books, and after this nearly all the regular exercises are in the writing books.

Neatness of work is made a prominent object from the beginning. Instructions are given as to ruling the slates and placing the work on the them, and pupils are required to keep their writing books free from blots, scribbling, and everything of the kind.

The engraved copies are placed on the blackboard by the teacher, and every difficult point carefully noticed. The pupils have a desire to do what they see the teacher do, and what they feel that he takes an interest in having them do well, they endeavor to do well. The pupils generally write the copy a few times in their practice books before they begin to write it in their regular copy books.

NEW MARION, RIPLEY CO., IND.

SILENT READING.

GEORGE F. BASS.

IN the Outline for Institute Work prepared by the State Board of Education for 1882 is the above subject. It is suggested that one lesson be given in the institute on this subject.

The immediate end or purpose of silent reading, given in this outline, is to understand and appreciate the thoughts and feelings expressed in written language.

The means necessary are:—

1. A knowledge of the words used—their derivation, composition, and meaning.
2. A knowledge of the figures of speech, including their interpretation.
3. A clear comprehension of the thought in each sentence.
4. A knowledge of the facts and events related to the selection—historical, biographical, geographical, literary, etc.
5. An appreciation of the literary excellence of the selection read.

At an institute last season an instructor who had studied this outline bluntly announced his subject as Silent Reading. He was greeted with a smile from many members of the institute that was not encouraging. He felt weak. He almost doubted there being such a subject named in the Outline. It occurred to him that it was necessary to show the importance of the subject before attempting to present it to this particular institute.

He began: "Most of our knowledge is obtained by silent reading." The heads of some of his hearers nodded approvingly. "Nearly all newspaper reading is silent reading. All lessons learned from books are learned by silent reading. The best silent reader is the best student, business man, or philosopher. The most practical reading is silent reading. Silent reading is *the* reading that should be taught in the public schools. Silent reading is a necessity, oral reading an accomplishment. Without silent reading there can be no intelligent oral reading. Silent reading should precede oral reading." By this time the institute had said many times "you are right," and he was ready to begin his subject.

Every teacher present was certain that silent reading should precede oral reading, and yet it is probable that all present had many times allowed pupils to begin to read orally before they had any idea of the meaning of even the first sentence. To show how this habit prevails the following sentence was placed upon the board: "The dog would have died if they had not cut his head off."

The first one called upon read it, orally, in such a way as to make it mean that the cutting of the dog's head off saved his life.

When the instructor suggested that it was quite a novel way of saving a dog's life, all saw the ludicrousness of reading it in that manner.

The reading sounded well. The tones were good, modulation perfect, articulation faultless. But it was bad oral reading, because it expressed the wrong meaning. It was not preceded by silent reading. The oral reading might have been correct, as it often is, from habit or from imitation, and yet not be intelligent to the reader. It is possible to express thoughts and not have them. Pupils may be taught to read well orally, and yet not comprehend what they read. Much of this kind of teaching is done. It does some good, but not the greatest good. A class taught this will "show off" well. Will get a "high mark" in examination, if they are examined in the ordinary way on pieces they have been drilled on.

Ask them why they emphasize a certain word, or why it would be wrong not to emphasize it, and they can give no reason save that it sounds better.

Try them on a new piece. After they have been taught how to pronounce the new words they will not be able to read it well orally. The teacher will say the reason is "they have not been drilled upon it." This means that they have not been told what words to "say the hardest," where to pause, etc.

A reading lesson should be studied. The pupil should decide what the meaning of each sentence is before attempting to read orally, i. e., he should read silently, first. It is customary to say that the expression should bring out the meaning. This is good, but some one at the State Teachers' Association said, "Make the meaning bring out the expression," which expresses as nearly the right idea as the first. This is simply saying, read silently first. [How to Teach Silent Reading will be the subject of another paper.]

INDIANAPOLIS, Feb. 15, 1883.

The substitution of italics and small caps for brains in composition is rather thin diet for the reader and an injustice to the compositor.

SEBASTIAN CABOT.

SEBASTIAN CABOT was certainly in one sense the discoverer of AMERICA: it was he who first made sure that it was a wholly new and unknown continent. In his early voyages he had no doubt that he had visited India, but after his voyage of 1498 he expressed openly his disappointment that a "New Found Land" of most inhospitable aspect lay as a barrier between Europe and the desired Asia. As the German writer Dr. Asher has well said, "Cabot's displeasure involves the scientific discovery of a new world." In his charts North America stands as a separate and continuous continent, though doubtless long after his time the separate islands were delineated, as of old, by others, and all were still supposed to be outlying parts of Asia. In this, as in other respects, Cabot was better appreciated fifty years later than in his own day. His truthful accounts for the time discouraged further enterprise in that direction. "They that seek riches," said Peter Martyr, "must not go to the frozen north." And after one or two ineffectual undertakings he found no encouragement to repeat his voyages to the North American coast, but was sought for both by Spain and England to conduct other enterprises. He was employed in organizing expeditions to the Brazils, or to the north pole by way of Russia, but the continent he had discovered was left unexplored. He was esteemed as a skillful mariner and one who had held high official station; he died dreaming of a new and infallible mode of discovering the longitude which he thought had been revealed to him from heaven, and which he must not disclose. The date of his death, like that of his birth, is unknown, and his burial-place is forgotten. But fifty years later, when Englishmen turned again for a different object toward the American continent, they remembered his early achievements, and based on them a claim of ownership by right of discovery. Even then they were so little appreciated that Lord Bacon, writing his *Reign of Henry VII.*, gives but three or four sentences to the explorations which perhaps exceed in real importance all else that happened under that reign.—T. W. HIGGINSON, in *Harper's Magazine for Jan.*

DEPARTMENT OF PEDAGOGY.

This Department is conducted by GEO. P. BROWN, President State Normal School.

EXPLANATORY.

THE editor and proprietor of the *Indiana School Journal* having determined to create a Department of Pedagogy, has invited us to conduct the same, and the invitation has been accepted. It will be our purpose to discuss educational topics that seem to us to have a present interest and importance, which topics will be selected from both the theory and the method phase of the teacher's vocation. We hope also to make this department a medium of communication between the Indiana State Normal School and her former students. These constitute an army of nearly four thousand teachers who are at work in every section of the state. Want of time and strength makes it practically impossible to edit and publish a paper from the school, and, besides, the large circulation of the *Journal* makes it a desirable medium through which to communicate with all of the teachers of the state.

Our editorial forces have not yet been fully organized, and therefore the present number does not present that variety of matter which will, we hope, be a characteristic of this department. Our only purpose is to be of some service to common school education by doing what we can to stimulate the teachers of the state to broaden and deepen their thought of the function of the school.

SCHOOL EDUCATION.

✓ We are in need of a good definition of school education—which means that we are in need of a clear idea of the purpose of the school. Until there is a general agreement as to what should be the results in knowledge and discipline of a course of training in the school, it will not be possible to formulate a definition of school education that shall meet with general acceptance. A definition of any thing is a comprehensive statement of what are the constituent elements of the thing.

Education in its widest sense has been defined to be "what each individual does for himself and what is done for him by nature and by human institutions to bring him on toward the realization of ideal manhood"; which, as has been said, is, in another form, the answer to the question in the catechism as to the chief end of man. This is a definition too extensive for the school.

From the point of view of this definition every institution of man and every characteristic of nature is for the education of each individual.

When we compare the school with the other human institutions, such as the home, the church, the state, business society, and social or polite society, it seems clearly to be designed as a place of preparation for these. It is intermediate between the nurture given by the home, and the training given by the other institutions named.

From this point of view, school education might be defined to be "what the pupil does for himself and what is done for him by the school to prepare him for rational self-activity as a member of the other institutions."

It seems to be essential to every definition of education that the ultimate result should be the rational self-activity of the individual. He is not to be trained to be a part of a machine, blindly obedient to the direction of a superior power, but to be self-directive—whether his position in life be one of command or of obedience to the command of another.

We have now progressed so far in our search for a definition as to find the school a preparation for independent activity in the university of institutions beyond the school. It is not the function of the school, therefore, to do the work of these other institutions. It must *prepare* its graduates to do that work.

In what does this preparation consist? This question satisfactorily answered, will enable us to construct a satisfactory definition of school education.

THE most valuable acquisition which the school can lead the pupil to make is *power*. Power is the result of a proper exercise

of the faculties. Intellectual power results from the proper exercise of the faculties of the intellect,—moral power from the proper exercise of the feelings and the will,—physical power from the proper exercise of the physical organs. It is not the business of the school to make physical athletes; nor, on the other hand, is the school a hospital to which the physically weak and diseased are to be sent for cure. The school assumes that the pupils possess a reasonable amount of physical health and strength when they enter the school. It is the business of the school to teach and practice the Art of Health to that extent that the health of the body shall be preserved. Physical power is not sought by the school as an end, but, in so far as it is sought at all, as a means or condition for the acquisition of intellectual and moral power.

Those activities of the Feelings and Intellect which shall result in intellectual and moral power are dependent upon the Will for their impulse to action. It is of primary importance, therefore, that the school shall make the education of the Will the most prominent of all of its aims.

THE kind and degree of intellectual power forms what we call the intellectual character of the individual. Dr. Stanley Hall calls attention to the history of the word "character" as significant of the process by which character is formed. The original meaning of the word was a die or stamp used to make impressions in a plastic substance. It afterward came to signify the impression itself, and was applied to psychical as well as physical impressions. Afterward it was used as the name of a permanent habit or trait. Any form or kind of activity becomes character when it has become habitual,—when it is put forth without any conscious command of the Will,—when it is spontaneous—has become a "second nature." The process by which those intellectual activities which result in power become habitual—are formed into character—is through their repeated exercise in obedience to a conscious mandate of the Will. The Will must hold the faculty to its work. It is the law of the mind that it tends to act more readily a second time in a form similar to that

in which it has acted before. It must follow, therefore, that if the repetitions of the act are sufficiently numerous the act will become automatic, i. e., unaccompanied by any conscious exercise of Will.

THE way by which intellectual acts become assimilated and formed into mind tissue is by the activity which is called reflection. Reflection is the turning of the eye of the mind back or inward upon the mental objects or products which the soul has constructed, and which constitute its world of ideas. The necessary condition of the perfect activity of this power is the silence of the senses. That the mind shall put forth its greatest energy in reflection it is needful that there be no conscious activity of any one of the senses. This suggests one of the essential conditions of the school, viz., that the work be such as shall train the powers of reflection, and that silence be preserved. The power to reflect is necessary to any useful exercise of the power to observe. He whose life is to be one of observation needs, therefore, to be trained to reflect. Hence the school must lead the pupil to form habits of reflection as a preparation for rational self-activity. Such exercises as will tend to form these habits must be provided by the school.

THE search for the definition of school education will be continued in the next number of the Journal.

WHAT SHOULD PUPILS KNOW?

A committee of the Board of Education of the city of Philadelphia has been visiting the schools of different western cities and determining the quality of the instruction given in them by applying a test to the fourth year grade. This test required of each pupil that he should write in proper form upon a page of letter-paper a letter in which he should relate his experiences on the way to school, or something of a like familiar character. The relative efficiency of the instruction given in the schools of the

different cities is to be determined, in the minds of this committee, by the ratio of correct papers prepared. They selected the fourth year grade for the reason that nearly one-half of those children who enter the public schools withdraw from them at this stage or before. By the test applied they assume that it can be approximately determined how much of real preparation for actual life the schools have led these children to make.

What could be discovered by this test?

1. The pupil's ability to spell, to construct sentences, to write, and to punctuate. This is the formal side of composition.

2. The character of the pupil's vocabulary; which would indicate the degree of culture in the use of language which the home and the school had furnished.

3. The pupil's habits of observation. The paper will show whether he has formed the habit of sharp and discriminating observation, or has not yet learned to see what his eye rests upon.

4. The order or method of the pupil's thinking will be shown. Do his ideas follow each other in obedience to law, or do they come without order or method?

5. The ability of the pupil to select out of the flood of things that are present to the senses those that are important to be known.

6. The power of self-control will be manifest by the readiness with which the pupil can concentrate his energies upon the task assigned, and the persistence with which he holds his mind to its accomplishment.

7. Indirectly, the paper will show how well the pupil can read. His vocabulary, his orthography, the construction of his sentences, the capitalization and punctuation, will be indicative of the intelligence with which he can read and has read the printed page. It will not show much as to his knowledge of arithmetical processes or of geography, but from the paper, and a glance at the programme of the school work, a good guess can be made of his attainments in these studies.

We believe that a discriminating observer can make the dis-

coveries suggested in the foregoing statements from these papers, provided the pupil has had sufficient practice in this kind of exercise to make it a familiar and easy method by which to express his thoughts. Pupils who have had no practice in composition and letter writing would be so embarrassed by the novelty of the mode of expression and ignorance of what we have called the formal side of composition, that they could do nothing.

WHAT shall be said of the propriety of applying the above test to pupils ranging from nine to ten years of age? There are two phases of the question which deserve consideration:—

(1.) Is this test a fitting test of *knowledge*? In other words, is that knowledge which this test implies the knowledge which the child most needs if he is to withdraw from school at this age?

(2.) Is this test a proper one to determine whether the mental training that the child has received is what he should receive during the first four years of his school life?

These questions ask for different things, and yet it may be true that the answer of one will determine the answer of the other. Let us try to answer the second question.

During the first eight or ten years the child must be employed in obtaining a knowledge of facts. It is the age of the acquisition of new ideas and forms. It is the time for storing the mind with material for future elaboration. These things acquired must be named; hence the importance of language. These things with their names must be repeated many times and in varied relations in order that they may be familiarly known. The child is only able to see the outside of things—the skin of them. He is unable to have a knowledge of the full content of anything that he may learn. Words mean, to him, only a small part of what they come to mean later in life, but they stand for something, and this something is a part of what they are subsequently found to contain. Almost the entire energy of the mind is expended in *acquisition of new ideas*, in *memory*, and in *imagination*. There are comparatively few of those acquisitions made that result from the higher processes of *thought*. The child is

constantly taking in and storing up in the mind the germs of ideas, as it were, which future thought is to develop. He can know nothing completely, but he should have a ready knowledge of many things, so far as he is able to know them. These things should be of those things which he will probably spend his future life in elaborating. Ready knowledge of these implies familiarity with the words which express them. This involves not only the power to talk, but to read and to write; that is, the spoken form of the word and also the printed and written form, and the proper arrangement of these in sentences.

It would be an excellent test of the pupil's familiarity with ideas and their names to call upon him to write down in connected form his ideas in any one of the familiar fields in which his mind had been wont to work. This would be a specially good test provided the pupil had not been accustomed to write down his ideas in that field.

It is our conviction that few pupils in our public schools, of the grade named, can acquit themselves well by this test, but if their training had been what the preceding analysis suggests, it is quite evident that the test would make that training manifest.

HISTORY.

What are the grounds upon which History may be regarded as one of the fundamental branches? What has this subject to give, either as discipline or knowledge, that is not furnished by other lines of study? The consideration of the subject under these questions, as determining its rightful place in a course of study, as also its method, is due from every thoughtful teacher. For the present let these inquiries relate to History in general, reserving for future discussion their special application to the history of our own country.

All subjects of study, pursued for whatever purpose, may be grouped into two great classes: first, those which deal with the conditions, phenomena, and principles of matter; second, those whose subject-matter is spirit, or mind. It will readily be seen

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that any particular study in the public school course of instruction will fall into the one or the other of these classes, when considered in respect of its materials. Arithmetic, Physiology, and Geography are subjects which present for study, materials belonging to the external world—the world of matter; while Logic, Grammar, and Literature have to do with the world of mind. History belongs to the second named group. This must be evident to any one who reflects upon the nature of the materials of the subject. It deals with the successes and the failures, but still the progress, of the human race—the deeds of man, not the facts, forces, and principles of nature. Still further, it regards chiefly human spirit as Will, and in its free activity. Logic and Grammar are products of mind as Intellect; Literature is the expression of, and appeals to mind as sentiment, Sensibility; History concerns itself with man, not as a science maker or art builder, but eminently as a doer in the world of affairs. History leads the student into the domain of free will, and reveals to him the spirit of his race in its development. It is the only study in his course that does this. It seeks to make him a participant in the entire struggle of the race. As Geography removes the place-boundaries of the student and makes him one with the whole world, History frees him from his time limitations and identifies him with every worthy achievement of the past.

W. W. PARSONS.

SCHOOL RECESSES.

There is a growing disposition to question the wisdom of general recesses in schools.

The reasons advanced for abolishing this time-honored custom are the following:

1. The recess in the winter season is prolific of colds caught from exposure on the play-grounds, or from sitting in the school room in a perspiration resulting from excessive exercise at recess.
2. Many of the cases of discipline,—some say one-half of them,—arise from trouble on the play-ground.

3. There is great danger of bodily injury from the reckless play of a large number of children.

4. The opportunities for acts of petty tyranny of the strong against the weak would be diminished by abolishing the recess.

5. The opportunities for moral contamination would, thereby, be reduced to a minimum.

These are undoubtedly objections that hold against the general recess.

What can be said for it?

1. It is an old custom practiced by the school for generations. What the wisdom of generations has sanctioned, especially in the sphere of conduct, may be supposed to have some good reason for its continued existence.

2. The school needs rest from study. The most perfect rest, except sleep, results from the transition from study to play. The last hour of both the morning and evening sessions will be much more fruitful of intellectual acquisitions, if there is an intermission from labor for ten or fifteen minutes, during the session, in which the pupils engage in free and active play. The more earnest, industrious, and orderly the school, the more necessity for this period of complete rest. Gymnastics is suggested. But this exercise is too much akin to the orderly procedure which is the characteristic of work to make it the best rest for the mind.

3. The public school is the training ground for active and independent life. There the children of all classes meet upon a plane of absolute equality; as to rights and privileges. In the school-room this equality is maintained by the teacher. On the play-ground it is enforced by the public sentiment of the school. It is here that the strong learn to respect the weak, and the weak and timid to maintain his rights against the strong. It is here that children learn to estimate each other by the personal qualities each possesses, rather than by the poverty or riches of the family.

The common school is the nursery of republicanism, and the play-ground is only inferior to the class-room for implanting its principles.

4. Discipline,—the training of the will,—is the main purpose of the school. It is no valid objection to the general recess that it affords occasions for the exercise of this discipline.

5. If it were true that the opportunities for moral contamination were increased by the public recess, it would be good reason for abolishing it. But it seems to us that this is not the truth. Immorality does not seek to display itself in the sunlight and to the public gaze. We mean those grosser forms of immorality into which children may be early led. It is only the secret and hidden places, that are favorable to this. The abolishment of the public recess will remove one of the strongest safeguards to morality.

The language of the play-ground is far from being all that is desired. Slang, obscenity, and profanity are not uncommon. But these are much less frequent on the play-ground of a well governed school than on the street. Children can only be kept from danger of contamination of this sort, by isolating them; Whether it is not better for the child to early meet these influences and be taught by teacher and parent to resist them is the question. Those who would keep their children from them must keep their children from the public school, even if the general recess shall be abolished.

ATTENTION.

The power of attention should be carefully trained in childhood. It is one of the most important of mental powers, for upon its activity depends the efficiency of each one of the specific faculties. Mental power is, to a large extent, the power of attention, and genius has been defined as "nothing but continued attention."

The following suggestions will indicate to the teacher the methods by which the power of attention can be cultivated:

1. Have pupils observe objects closely.
2. Require them always to study with close attention.
3. Read long sentences and have pupils write them.
4. Read quite long combinations in mental arithmetic, and have pupils repeat them.
5. Mathematical studies are especially valuable in cultivating the power of attention.

The following suggestions are made to aid a teacher in securing the attention of his pupils:

1. Manifest an interest in the subjects you are teaching.
2. Be clear in your thought, and ready in your expression.
3. Speak in a natural tone, with variety and flexibility of voice.
4. Let your position before the class be usually a standing one.
5. Teach without a book as far as possible.
6. Assign subjects promiscuously, when necessary.
7. Use the concrete method of instruction, when possible.
8. Vary your methods, as variety is attractive to children.
9. Determine to secure their attention at all hazards.

—*Edward Brooks, in Teachers Institute.*

OFFICIAL DEPARTMENT.

POINTS OF LAW GOVERNING THE ENUMERATION OF
SCHOOL CHILDREN.

1. The trustee must not include in this list of enumeration the names of persons transferred *from* his township, town or city. He must include the names of persons transferred *to* his township, town or city.

2. Each trustee should make a separate list of persons transferred to his township, town or city. The list may be appended to the list of enumerated persons living in his own school corporation.

3. At the time the enumeration is taken the number of persons between ten and twenty-one years of age who can not read or write must be ascertained and reported.

4. The law now requires the enumeration to be taken between the first of March and the first of May, and requires the trustees to report to the county superintendent on or before the first day of May.

WHAT NAMES LISTED.

1. The trustee "shall list the names of parents, guardians, or heads of families," "having charge of children," who are entitled to be enumerated for school privileges. The names of no other persons can be legally placed upon the list. (See Section 14.)

The enumeration shall exclude: *a.* All children who are not six years of age. *b.* All persons who are over twenty-one years of age. *c.* All persons under twenty-one years of age who are married. *d.* All children whose parents or guardians are not *bona fide* residents of the school corporation. *e.* All children whose parents or guardians are transferred to another school corporation.

The enumeration should include all other persons between six and twenty-one years of age in the school corporation, together with all children entitled to school privileges, whose parents or guardians have been transferred to the school corporation.

Attachments to school districts in townships: *a.* Only those who have children to be enumerated can be attached to a school district. *b.* Those who have been once attached can not be detached, except "by consent of the trustee, for good cause shown." *c.* It is the duty of the trustee to ask the following classes of persons to what district they desire to be attached: 1. All persons not heretofore listed. 2. All who have changed their residence since the last enumeration. 3. All whose school privileges have been affected by a change in the location of a school.

TRANSFERS.—*a.* Transfers can be made between the first day of March and the last day of April. (Section 16.)

b. Transfers can be granted only when it is shown that the persons so transferred can be better accommodated. (Section 16.)

c. Persons desiring to be transferred must apply for such transfer to the trustee of their own school corporations.

d. When a transfer has been applied for, it is the duty of the trustee to hear the case, and then to make a record of his action in the case in his record book.

e. A transfer to be legal must be a matter of record.

f. The date when each transfer was made should be recorded on this report.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

Does your subscription to the Journal expire with this issue? If so renew at once, that there may be no break in your file. Do not fail to send in time to secure the January number.

No one will omit the article on "Silent Reading." It will bear study.

The article on "Writing," by the Supt. of Ripley county, is practical and to the point. Read it.

The article in this Journal on "The Relative Value of Knowledge and Discipline" deserves a careful reading.

MRS. RUNKLE contributes to the March *Century* A Plea for the Higher Education of Women, with special reference to the recent movement toward admitting women to Columbia College.

GRADUATION FROM THE GRADED SCHOOLS is being discussed and arranged for in a great many counties at this time. The subject is one of much importance, and is worth the careful attention of all.

We publish in this issue the introduction to a series of articles upon "The Elements of Governing Power in the Teacher. They are from the pen of Prof. E. E. Smith, of Purdue University, a gentleman well and favorably known to the teachers of Indiana.

The article on "Tobacco-using" is hard to beat. By such articles the Journal does not hope to reform those who have acquired the habit of using tobacco, but it does hope to stimulate teachers up to the point of using their best endeavors to dissuade boys from acquiring the habit.

The Legislature, up to the date of going to press, has not made any change in the school law, and the prospect now is that none will be made. The next number of the Journal will contain a summary of what is done for educational institutions.

Later.—The bill providing an endowment for the State University has failed. The appropriation to Purdue University was given on condition that the rule forbidding Greek Fraternities is abolished.

PRES. E. E. WHITE RESIGNS.—Just as we go to press we learn that Pres. White, of Purdue University, resigns, to prevent the action of the Legislature with reference to Greek societies in the University. It is to be hoped, for the good of the institution and the state, that Dr. White may be induced to reconsider and withdraw his resignation.

Edward F. Steel, president of the Philadelphia School Board, and James Pollock, an active member of the same board, recently made a visit to several cities with a view of testing the comparative merits of their schools. An editorial article on the test these gentlemen applied gives place to a more exhaustive discussion of the same thing by Mr. Brown, in the Department of Pedagogy, to which readers are referred.

Suffice it here to say, that these members of the Philadelphia Board were intelligent gentlemen, and knew what they were looking for—and that the test they applied is *the coming test of the public school*. Reader, is your school ready for it?

"STICK TO YOUR LAST."

At the late State Association "Teaching Thrift in the Public Schools" was one of the subjects discussed, and the point brought out and urged was that children while at school could and should be taught business principles. That not only honesty and fair dealing, which involve morality as well as business integrity, but also economy, frugality, generosity, and other matters that pertain to living should be taught. It was emphasized that children should be taught that every one should "live within his means"; that a person who contracted a debt without knowing how he was to pay it was dishonest; that poor people especially should never go in debt; that there is no luxury like being out of debt and having a little money in bank. The credit system is the bane of the world. Pay as you go. These are all good points, and should certainly be taught, both at home and at school.

"*Stick to your last*" is an old adage that will serve as a text for another excellent lesson. It can be best illustrated by this other old proverb, "A rolling stone gathers no moss." The interpretation is: select some trade or business and *stick to it*. This is the key to success. Most people that fail to make at least a comfortable living, are those who frequently change their work. About the time they have well mastered a business they grow tired of it and think they will try something else. Or, it may be they think that they can make money a little more rapidly at something else, and so change for that reason.

Another point: A great many persons undertake a certain enterprise and make a success of it, but not content to "let well enough alone," they undertake to do several things at once, and so fail in all.

Such lessons as these properly put before the older boys and girls of our schools could not fail to do good. Try it, and if it should fail to benefit the pupils the teacher will perhaps get some good out of the exercise.

DORE'S PASS-PORT.

Our readers doubtless know that Gustave Dore, the greatest draftsman and book illustrator that the world ever knew, is dead. During his life he made fifty thousand different sketches. Dore's Bible, Milton, and Dante are known to most. He was the artist of and for the people. We publish a characteristic anecdote of him :

It is related of Gustave Dore that many years ago, while on a tour in Switzerland, he happened to lose his pass-port. Arriving at Lucerne, he asked to be allowed to speak to the Mayor, to whom he gave his name. "You say that you are M. Gustave Dore," replied the Mayor, "and I believe you ; but," he added, producing a pencil and a piece of paper, "you can easily prove it." Dore looked around him, and perceived some women selling potatoes in the street. With a few touches he cleverly reproduced the homely scene, and appending his name to the sketch, presented it to the Mayor. "Your pass-port is perfectly in order," remarked the official, "but you must allow me to keep it as a souvenir, and to offer you in return one in the ordinary form."

HOW TO USE BOOKS.

Mr. Pool, the librarian in charge of the public library of Chicago, is having the various classes of the high schools meet him on Saturdays for the purpose of giving them instruction as to how to use reference books. He takes some subject, such as Rome, Egypt, Botany, etc., and illustrates.

The idea is an excellent one. While most of the readers of the Journal can not refer their pupils to a large public library, they can do much in teaching them how to use to the best advantage what books they have, and that is not an insignificant item.

1. Children need instruction as to how to use their text-books; how to study their lessons.
2. They need careful and repeated lessons on the use of the dictionary.

3. They need instruction as to how they shall read up, collect material, and write upon any given subject assigned for study or composition.

How to best use books, is a department of school work, which is at present very much neglected.

GOVERNOR BUTLER AND THE NORMAL SCHOOLS.

The following editorial in the *Journal of Education* (Boston) of February 3d, in reply to Governor Butler's attack upon the right of the State Normal Schools to exist, is worthy of careful perusal:

"Our reform Governor, in Massachusetts, is concerned for the dear people who are compelled to pay three hundred and thirty five dollars for each graduate of the State Normal Schools, and asks, triumphantly, "What right had these young men and women to so expensive an education, out of the common school fund, at the hands of the State?" But what right has anybody to the people's money,—the Governor, for example, to a salary eight times the size of an ordinary school-mistress? We suppose the State has important work at the State House to be done, and think there may be a crisis in which the best man for the post may not be a millionaire, who would be glad to crown himself with this honor without expense to the people, but a poor man, who needs a few thousand a year to keep things going. The State pays, like any private dealer, for what it gets. Massachusetts pays five millions, annually, for the free schooling of her children, and gets, in return, our new Massachusetts,—about as good a patch of humanity as is found on the planet. She pays \$500,000 annually for the education of 20,000 youth in secondary and normal schools, and gets, first, a class of young people that are filling positions of high usefulness at home, and representing the commonwealth honorably elsewhere; and secondly, a reputation for the superior education which brings into the State a good deal more money from students coming to her schools than the half-million she spends.

If Governor Butler will read the reports of Horace Mann he will learn something about the average teacher in the common schools of Massachusetts a generation ago, and, if he will visit any State destitute of normal instruction, he can see what the same public official is there to-day. Horace Mann planted the first State Normal School in America on the Fourth of July, at Lexington, and the result of that departure will become as notable in time as the old skirmish that opened the Revolution. Since that day, Massachusetts, through her High, Normal, and Training Schools, Institutes, and Board of Education, has been "fighting it out on that line" for the establish-

ment of trained instruction for all her children. She has achieved this result, that, to-day, she has a larger proportion of trained teachers in public schools than any State, and is constantly sending forth good teachers to commanding positions elsewhere. Through her Normal Art School she has practically moulded,—not exactly “rude figures,” as our modest Governor suggests,—but the Industrial Art Education in several of the States of this Union.

Now it may be that no particular youth has any special “right” to three hundred and thirty-five dollars of the people’s money. But certainly the commonwealth of Massachusetts, renowned all over the earth for financial capacity, understands that a thousand dollars would be a small sum to pay for training one live teacher who should wake up a whole county to a new educational life, and that she never made a better investment than in her Secondary Education, which has brought her public schools out of the chaos of thirty years ago to the beginning of order, skill, and eminent success, which we find in them to-day.”

“DEPARTMENT OF PEDAGOGY.”

With this number of the Journal we open a new department, “Pedagogy,” and have been fortunate in securing Geo. P. Brown, President of the State Normal School, to conduct it. No man in the state is better qualified to give to the readers of the Journal the latest and best methods and theories on all educational subjects. He is thoroughly capable of discussing subjects from a basis of principle, and of developing them according to logical methods.

Education in this country has reached a stage when the successful teacher must know, not simply the method, but the philosophy of the method—not simply the *how*, but the *why* of the *how*.

This department will be of special interest not simply to the former students of the State Normal, who will be glad to see discussed from month to month principles and methods somewhat familiar to them, but also to students of other normal schools, and to the profession at large. A good thought, a good method, a good theory, is universal in its application, and is valuable to all alike. It is hoped to make this department especially valuable to those not able to attend any normal school—such persons certainly need it most.

So much by way of introduction—the department will speak for itself.

COMMISSIONED HIGH SCHOOLS.—In the list of commissioned high schools published last month, the following should have been in—Rockport, Anderson, Brookville, and Kenallville.

GEMS OF THOUGHT.

Kind words produce their own image in men's souls, and a beautiful image it is. They soothe and comfort the hearer. They shame him out of his unkind feelings. We have not yet begun to use them in such abundance as they ought to be used.—*Pascal.*

The maelstrom attracts more notice than the quiet fountain; a comet more attention than the steady star; but it is better to be the fountain than the maelstrom, and the star than the comet, following out the sphere and orbit of quiet usefulness in which God has placed us.—*Dr. John Hall.*

THE LADDER OF TIME.

I count this thing to be grandly true:
That a noble deed is a step toward God—
Lifting the soul from the common sod
To a purer air and a broader view.

{ We rise by things that are under foot;
By what we have mastered of good and gain
By the pride deposed and the passion slain,
And the vanquished ills that we hourly meet.

We hope, we aspire, we resolve, we trust,
When the morning calls us to light and life,
But our hearts grow weary, and, ere the night,
Our lives are trailing the sordid dust.

We hope, we resolve, we aspire, we pray,
And think that we mount the air on wings,
Beyond the recall of sensual things,
While our feet still cling to the heavy clay.

Wings for angels, but for men
We may borrow wings to find our way—
We may hope, and resolve, and aspire, and pray,
But our feet must rise or we fall again.

Only in dreams is a ladder thrown
From the weary earth to the sapphire walls;
But the dreams depart and the vision falls
And the sleeper awakens on his pillow of stone.

Heaven is not reached by a single bound,
But we build the ladder by which we rise
From the lowly earth to the vaulted skies,
And we mount to its summit round by round.

—[*J. G. Holland.*

QUESTIONS AND ANSWERS.

STATE BOARD QUESTIONS FOR JANUARY.

READING.—1. In what respect does reading differ from speaking? 10

2. Why should the correct pronunciation of words receive attention? Why is a dictionary needed in the school-room? 2 pts, 5 ea.

3. Why must the thought be grasped and the emotion felt before either can be experienced? What is the objection to teaching reading by imitation? 2 pts, 5 each.

4. Underscore the words in the following stanza, the meaning of which should be taught as a part of the preparation for its correct reading:

"Better than grandeur, better than gold,
 Clear than riches a hundred fold,
 Is a healthful body, a mind at ease,
 And simple pleasures that always please.
 A heart that can feel for a neighbor's woe,
 And share in its joy with a friendly glow,
 With sympathies large enough to enfold,
 All men as brothers, is better than gold."

10

5. Write the questions which you think would assist the pupil in the comprehension of the thought in the above lines. 2 pts, 5 each.

6. Read the above selection, and also one of prose.

2 pts, 1 to 25 each.

PHYSIOLOGY.—1. Why should we stand or sit erect? 10

2. Why should not severe labor be imposed upon growing children? 10

3. Why is a different kind of food required in winter than in summer? 10

4. What are the evil effects of eating more food than the system requires? 10

5. What is the effect of much drinking while eating? 10

6. What is the difference in meaning between the terms nutritious and digestible in relation to food? 10

7. What is the effect of alcohol upon the blood? 10

8. How many cubic feet of air are vitiated each minute by one person in breathing? 10

9. What proportion of the blood in the system is required for the brain? 10

What forms the sensorium? State its function. 2, 5 each.

GRAMMAR.—1. When does a common noun become a proper noun? a proper noun a common noun? 5. 5.

2. How are compound personal pronouns formed? In what cases are they used? 4. 6.

3. What are the classes of limiting adjectives? Define two classes. 4. 6.

4. What is the distinction between a direct and an indirect object? Which becomes the subject when the verb assumes the passive form? Illustrate 3. 2. 5.

5. What is a participle? What participles does a transitive verb have? 5. 5.

6. Give the classes of co-ordinate connectives. 10

7. Correct: it was george that answered you not me it is not me but him you ought to blame. 10

8. Analyze: Who, that marks the fire still sparkling in each eye, but would deem their bosoms burned anew? 10

9. Punctuate and capitalize: sheridan pitt and fox all drank hard and worked hard they were all great in the councils of the nation but not one of them could rule his own household london athe-neum 10

10. Write a sentence containing two subordinate clauses: one used as an adjective, the other as adverb. Analyze it. 5. 5.

THEORY OF TEACHING.—1. Why should arithmetic be taught? State both the objective and the subjective reasons. 20

2. What should be the nature of the instruction in geography given to pupils during the first three years of school? 20

3. Give reasons for teaching pupils to spell words, the meanings of which they do not know. 20

4. Why is the giving of prizes for superior intellectual attainments objectionable? 20

5. Give reason for teaching pupils words before they know the letters of the alphabet. 20

NOTE.—The superintendent is advised to give credit to the applicant for the intelligence manifested by his answers rather than for their conformity with his own notions of their correctness.

PENMANSHIP.—1. In how many ways are the strokes of the pen united in forming letters? How far does the letter *p* extend below the base line? 5. 5.

2. Which letters extend two spaces below the base line? What is meant by the analysis of letters? 5. 5.

3. What letters are shaded below the base line? What is meant by spacing? 5. 5.

4. What space should be allowed between words? Between sentences? 5. 5.

3. Name the principles used in forming the capital letters. Name the classes into which the small letters are divided. 5, 5.

Note.—Four writing, in answering the above questions, will be taken as a specimen of your penmanship, to be marked 50 or below, as it may merit.

ARITHMETIC.—1. What is the difference between a factor and a divisor? Between remainder and balance? 5, 5.

2. A farmer exchanged 100 bushels of wheat, at $\$62\frac{1}{2}$ cents per bushel, for corn at $37\frac{1}{2}$ cents per bushel; how many bushels of corn did he receive? Analyze. Proc. 7, ans. 3.

3. The sum of two numbers is 785, and their difference 27; what are the numbers? 5, 5.

4. Divide $1\frac{1}{11}$ by $\frac{1}{11}$; solve by analysis, giving reasons for your work. 5, 5.

5. How many decimal places will be required to express decimally $\frac{1}{11}$? Why? 5, 5.

6. How many loads will be contained in a pile of wood 40.16 ft. long, 7.04 ft. high, and 4 ft. wide; if each load contains $1\frac{1}{2}$ cords? 5, 5.

7. If I sell $\$12,000$ 8 per cent. stock at 115, for 5 per cent. stock at 69; do I gain or lose on annual income? How much? 5, 5.

8. How large a sight draft can be bought for $\$259.52$, exchange being $1\frac{1}{2}$ per cent. per annum? 5, 5.

9. Extract the square root $\sqrt{\frac{1}{11}}$? 5, 5.

10. Find the cubical contents of a cylinder that will just enclose a sphere 9 in. in diameter. 5, 5.

U. S. HISTORY.—1. Write a sketch, not to exceed two pages, of the Colonial History of the United States, setting forth the origin, organization, and chief features in the development of the principal colonies, *e. g.*, Massachusetts, Pennsylvania, Virginia. 100

NOTE.—In this sketch special attention must be given to conciseness of statement, orderly arrangement and clearness of expression.

GEOGRAPHY.—1. In what season is it Christmas in Melbourne, Australia? 10

2. What is a volcano? Name four of the most noted. 5pts, 2 ea.

3. What three motions has the sea? Describe each. 4, 2, 2, 2.

4. Which of the United States border on the Gulf of Mexico? Name and locate the capital of each. 5, 5.

5. What mountains separate France from Spain? France from Italy? What river of France flows into the English Channel? What two into the Bay of Biscay? 5 pts, 2 each.

6. What river flows through the plain between the Alps and Apennines? What two seas border on Italy? 5, 5.

Name five seas that border on the east of Asia. 5 pts, 2 each.

In what direction is the Baltic Sea from the Strait of Gibraltar?

London from St. Petersburg? Where is the Gulf of Lyons? Lake Onega? Rome? 5, 2 each.

9. What determines the position of tropic of Cancer?

10. Name the highest mountain system in North America? In Europe? 5, 5.

ORTHOGRAPHY.—1. What is an aspirate? Write 4 aspirates.

2. What is a syllable? Write five words which are monosyllables. 2 pts, 6, 4.

3. What is the sound of *th* in think? This? Beneath? Thither? With? 5 pts, 2 each.

4. Write each of the following words phonically, indicating each accented vowel sound by the proper diacritical mark: *again, viewless, farewell, diamond, Wednesday*.

5. What is a diphthong? When is it called proper? When improper? 3 pts, 6, 2, 2.

6. Spell twenty words dictated by the superintendent. 20 pts, 2½ each.

ANSWERS TO STATE BOARD QUESTIONS FOR FEBRUARY.

ARITHMETIC.—1. As 1° in longitude equals 4 min. in time, the difference in time between two places will be found by multiplying the difference in longitude in degrees by 4, and reducing the answer to hours and parts of hours, the time of the place east being faster, and that of the place west being slower.

2. a. As 3 men earn \$24 in 2 days, 1 man will earn ⅓ of that sum in 2 days, or ⅔ in 1 day, which is \$4.

b. If 1 man earns \$4 in 1 day, 7 men will earn 7 times \$4 in 1 day, or \$28.

c. If 7 men earn \$28 in 1 day, it will take them as many days to earn \$84, as 28 is contained times in 84, which is 3 days.

$$3. \quad \begin{array}{r} 3 \quad 2\frac{1}{2} \quad 10 \quad 2\frac{1}{2} \quad 2\frac{1}{2} + 2\frac{1}{2} = 5\frac{1}{2} \quad 195 \\ \hline 2\frac{1}{2} \quad 3\frac{1}{2} \quad 2\frac{1}{2} \quad 2\frac{1}{2} \quad 2\frac{1}{2} \quad 2\frac{1}{2} \quad 100 \\ \hline \end{array} = 1\frac{1}{2}.$$

4. a. $.00493 \times 1000 = 4.93.$

b. $(1 - \frac{1}{8} + .025) = .9.$

c. $4.93 \times .9 = 4.437.$

5. a. As 8 boards can be cut off from the log, each of the given length and width, and therefore each measuring 24 feet, board measure, the whole will make 192 feet.

b. 192 feet at \$7.50 per M., will be worth \$1.44.

6. a. As 2½ boys = 1 man, 5 boys will equal 2 men; therefore,

b. $10 : 12 :: 5\frac{1}{2} : 6.4.$

7. *a.* \$5,000 at 6% for 4 mos. will amount to \$5,100.
b. 4 mos. int. at 10%, on \$5,100, will be \$170.
c. \$5,100 — \$170 = \$4,930. Ans.
8. *a.* The fence round the given field will be $216 + 216 + 24 + 24$ rods long = 480 rods.
b. 480 rods at \$312 = 65 cents a rod.
c. The area of the given field is 216×24 sq. rods = 5184 sq. rods.
d. $\sqrt{5184} = 72$.
e. The fence round the square field will be 288 rods long.
f. 288 rods at 65 cents a rod = \$187.20.
9. *a.* As he sold at 40% profit, he sold at 140% of 20 cts. = 28 cts.
b. As he sold at $12\frac{1}{2}\%$ less than marked price, 28 cts. are $87\frac{1}{2}\%$ of marked price, and this last will be 10% of $87\frac{1}{2}\%$ of 28 cts., or 32 cts.
10. *a.* If 1 acre is sufficient pasture for 5 sheep, $\frac{1}{5}$ acre is sufficient for 1 sheep.
b. As 1 acre plowed land is sufficient for 8 sheep, $\frac{1}{8}$ acre is sufficient for 1 sheep.
c. Therefore 1 sheep will require $\frac{1}{5} + \frac{1}{8}$ acres, or $\frac{13}{40}$ acres.
d. If $\frac{13}{40}$ acres will keep 1 sheep, 325 acres will keep as many as $\frac{13}{40}$ are contained times in 325, or 1000.

GEOGRAPHY — 1. The course it takes in its revolution around the sun. During the summer the sun is much longer above the horizon than in winter. In summer the sun shines more directly upon the surface of the earth than in winter. Hence the summers are warmer than the winters.

2. A Sea is a part of the water more or less surrounded by land. A Gulf is a part of the water which extends into the land. A Lake is an inland sheet of water. A River is a stream of water flowing into some other body of water.

3. Into four—enlightened, civilized, half-civilized, and barbarous.

4. The Amazon rises in the Andes Mountains, and flows north-west until it reaches the 5th parallel; it then turns to the east, flows through the Selvas and empties into the Atlantic Ocean. The Volga is the largest river in Europe. It rises in the Voldai Hills, flows through the great eastern plain and empties into the Caspian Sea.

5. Cape Horn is the most southern point of South America. Terra del Fuego, or Fireland, lies north of Cape Horn.

6. Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Manitoba, British Columbia.

7. New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia. The greater portion of the state is mountainous.

8. East of the United States, and belong to England.

9. In the northern part of Utah. Utah lies west of Colorado and is divided by the Wasatch Mountains into two nearly equal parts. The western is a section of the Great Basin; the eastern is a part of the Colorado Plateau.

10. Lake Titicaca. Caspian Sea, Superior, Victoria, Albert, Aral Sea.

PENMANSHIP.—1. The pen-holder should be held between the thumb and first and second fingers, so as to rest against the second finger near the corner of the nail and cross the first finger just forward of the upper joint, the end of the finger dropping down on the holder. Let the thumb rest against the left side of the pen-holder opposite the lower joint of the first finger. The hand should be turned over to the left, far enough to allow the points of the pen to press equally on the paper.

2. The height of *r* and *s* is *one-fourth* more than other short letters.

3. *b, l, h, k* and *f* are extended *three* spaces above the base line; *i, g, y, f* and *s* extended two spaces below the base line and one above.

4. *A, N, M, F, T, H, K, S, L, I, J, P, B, R, G.* The seventh principle is composed of the left curve, right curve, and left curve.

5. The parts of *i* are right curve, first principle and dot; *w*, right curve and first principle repeated; *v*, third principle modified, dot, and level curve; *l*, fifth principle finished with lower turn and right curve; *g*, fourth and sixth principles.

PHYSIOLOGY.—1. Unless the fracture be very serious, a bone thus injured readily heals without leaving any trace of the hurt. Should too much weight or too rough usage bend the bone at the point of fracture, the limb is crooked, but its usefulness is not necessarily greatly impaired. In the case of a sprain, however, the ligaments are generally either torn or badly bruised and the bones possibly dislocated. Should the injury not be promptly attended to, inflammation and swelling may set in, rendering it difficult for the surgeon to determine definitely the character or extent of the injury, very painful to the sufferer to have such changes made in the location of the parts as may be necessary, and even sometimes resulting in the loss of the synovial fluid of the joint, and a permanent stiffness from the growing together of the bones.

2. Chiefly from the habit of endeavoring to balance the body in this way.

4. Two, that of the blood and that of the lymph. The former has been subdivided into *pulmonic*, *systemic*, and *portal*. The latter into *mesenteric* and *lymphatic*, (or, from another point of view, into *right* and *left* lymphatic). The object of pulmonic circulation, from

MISCELLANY.

PORTLAND.—The schools show a total enrollment of 562, and are doing well. Morgan Caraway is superintendent.

A joint meeting of the teachers of Williams and Defiance counties, Ohio, and De Kalb and Steuben counties, Ind., was held at Butler, Ind., Feb. 16th and 17th.

HAMILTON COUNTY.—The school board in this county is well organized, and the schools are well organized. The examination questions for pupils, sent out by Supt. A. H. Morris, indicate a good standard.

FRANKLIN.—A gentleman who recently visited the Franklin schools makes a favorable report. He says the schools are not equally good, some being very much better than others. One recitation is reported, "the best I ever heard in my life."

TERRE HAUTE.—The Report of the Terre Haute schools for 1881-2 is one of the most tastefully arranged and printed manuals we have yet seen. It is full, and shows the schools in excellent working order. Supt. W. H. Wiley is at the helm, and keeps the school ship in the current of progress.

The annual meeting of the Department of Superintendency of the National Educational Association met in Washington, D. C., Feb. 20th. The programme (incomplete) of the meeting was not received at Indianapolis till Feb. 14th, making the notice entirely too short. N. A. Calkins, of New York City, was president.

CAMBRIDGE CITY.—A new variety of public entertainment was recently inaugurated by the public schools of Cambridge City, in the shape of a Reading Contest. Readings were given from the Third Grade up, and prizes were awarded. This is certainly a good method of stimulating pupils to greater efforts in this direction, and to interest parents.

DELAWARE COUNTY.—The board of education of Delaware county seems to be one of the most active in the state. At a meeting held February 19th, they discussed fully the law under which the enumeration is taken, had reports from committees on various subjects, organized a plan for a general canvass for the flood sufferers, etc., etc., and telegraphed for State Supt. Bloss to address them and the teachers and citizens, Saturday, Feb. 24th. He accepted the invitation. Supt. Clancey is the director.

NEWTON COUNTY.—The Newton county teachers' association, held Kentland, February 16th and 17th, was a success in spite of the

stormy weather and high waters. • Supt. B. F. Johnson, of Benton county, was with us on both days, and assisted very materially in the work. He read a very able paper on the "Objects and Methods of Government." Our teachers showed their appreciation of his work by a vote of thanks. Many other visitors were present, among whom was J. W. Caldwell, of Sheldon, Ill.

A committee of three, viz, N. F. Jenkins, J. J. Eckman, and Wm. M. Sinclair, was appointed to meet the teachers of Northwestern Indiana at Monticello (time to be determined), for the purpose of perfecting a permanent organization of a Northwestern Indiana Teachers' Association. March 9th is suggested for preliminary meeting. Let the good work begun go on. W. H. H.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.

Washington, Ind., April 4, 5, 6, 1883.

WEDNESDAY, April 4.—Afternoon. 1. Visit schools. 2. Arrange Exposition work. **Evening**—1. Address of welcome, by Mayor Arthur Beddoe. 2. Response, J. R. Trisler, Lawrenceburgh. 3. Inaugural of President, H. B. Hill, Aurora. 4. Business. 5. Social.

THURSDAY, April 5.—1. "Some Cyphering at the Country School Problem," J. C. Macpherson, Supt. Wayne Co. Discussion opened by H. A. Yeager, Supt. Gibson Co. 2. The Coming Superintendent, J. S. Hall, Supt. Crawford Co. Discussion opened by J. R. Hart, Supt. Switzerland Co., and A. P. Carr, Supt. Clark Co. **Afternoon.** 1. Appointment of Nominating Committee, and fixing time and place of next meeting. 2. Culture, and the Influences which Cause its Growth, D. S. Kelley, Supt. Jeffersonville. Discussion opened by W. E. Lugenbeel, Pres. Southern Ind. Nor. College. 3. Schools of New Harmony in "Community Times," Col. Richard Owen, New Harmony. 4. Principles that prevail in Methods of U. S. History, Prof. Howard Sandison, State Normal School. A Lesson with Pupils Illustrative of these Principles, Prof. A. L. Wyeth, Prin. of Training School, State Normal. **Evening**—1. The Limestone of Indiana, Prof. John L. Campbell, Wabash College. 2. "Antietam," Prof. John M. Bloss, Indianapolis.

FRIDAY.—1. Business. 2. Language Lesson with Class, Miss Ophelia H. Roddick, Washington. 3. The Work of the Primary Teacher, Miss Kate Huron, Danville Normal. Discussion opened by H. B. Jacobs, New Albany, and A. J. Snoke, Princeton. 4. Sauveteur's Method, Miss Ella Munson, Mitchell. Discussion opened by J. A. Marlow, Supt. Sullivan Co. 5. What must be Done with the Growing Hoodlum Element, James G. May, Salem. Discussion. **Afternoon**—1. Experiments in Natural Philosophy, Prof. C. E. McVay,

Cincinnati, O. 2. Supplementary Lesson in U. S. History, Prof. A. L. Wyeth, State Normal. Discussion of Prof. Sandison's paper and Prof. Wyeth's Lesson, opened by C. F. Coffin, Supt. New Albany. 3. Reports of Committees. *Evening*—1. Address, E. E. White, Pres. Purdue University. 2. Social.

SATURDAY.—1. Visit Coal Mine and Indian Mounds.

Exposition of School Work.—Teachers are requested to bring such of their school work as can be conveniently placed on exhibition, and space will be assigned for it. Every one can contribute one paper or more to this new and valuable feature of the association.

Hotels.—The principal hotels will make reductions to those who present certificates of membership, Hyatt Hotel, \$1.50 per day; Meredith House, \$1.00 per day.

Railroads.—Send to D. E. Hunter, Washington, and get certificates that will enable the holder to procure tickets at reduced rates on the following roads: O. & M.; L., N. A. & C.; J., M. & I.; C., I., St. L. & C.; L. & V.

L., E. & St. L., and E. & T. H., pay full fare going, and obtain certificate at the Association that will enable you to purchase return ticket at one cent per mile.

February 24, 1883.

D. E. HUNTER, *Chm. Ex. Com.*,
Washington, Ind.

BACK TALK.

Editor School Journal.—In the last number of the School Journal you call attention to the fact "that *all* enjoy the benefits of the State Teachers' Association, and *a few* pay the expenses." A cursory examination of the list furnished by the Treasurer shows that *three* of those honored by the Association with a place upon its programme failed to pay their annual dues, as did also a former President of the Association, a candidate for President at the last meeting, two of the *present* Executive Committee, and one of the present Vice-Presidents. All of these, we believe, were at the meeting. If these high dignitaries were so forgetful, can you not make some allowance for the "common taters"? *

Editor School Journal.—On page 100 of the February number, you say that "The Teachers' Guide, of Cleveland, Ohio, has '*turned its heels to the daisies*.'" Is not that rather a peculiar way to bury an individual—with its face down?

"At last he's dead—and here he lies,
And now his soul at ease is,
With the end of his nose and the *tips of his toes*
Turned up to the roots of the daisies."

According to the writer's recollection, these lines gave origin to the expression "turned his *toes* to the daisies," and are somewhat more in accordance with burial customs. What say you? S.

PERSONAL.

B. B. Harrison is superintendent of the Waterloo schools.

A. W. Higgins is serving his third year as principal of the Veedsburg schools.

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Levy, Baker & Co. have removed their business establishment from Madison to Indianapolis. They office 143-5 South Meridian street.

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This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

ZOOLOGY.

A venomous lizard from Mexico has been given to the Zoological Garden of London, by Sir John Lubbock. All of its teeth are con-

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nected with poison-glands. This is the only four-legged animal known to have poison-fangs. It is called *Heloderma horridum*, or in English, "horrid warty-skin."

J. Schneck, of Mt. Carmel, Ill., captured a common garter-snake, July 26, 1882, containing *seventy-eight* young, from seven to five inches long. Most of them were well developed. They were in sacks, three to five in each. The same naturalist took eighty-seven young, each about six inches long, from a common spotted spreading adder which he had shot into.

The robin collects a large billful of worms before going to her nest. The smart English sparrow notices this and secures them while the robin is scratching up more. This story is related by Elliot Cones, the most eminent ornithologist in America.

Now is the time to see the chickadee at his best. This bird is always with us, but most abundant in winter. Along any thicket or deep wood near streams you will find them in sunny March days, "merrily singing their chick-a-dee-dee." It is a "defier of both frost and heat," and as Burroughs says, a "diligent searcher after truth in the shape of eggs and larvæ of insects." Emerson's poem, "The Titmouse," shows its points as both hero and philosopher, and is well worth reading. He describes its color: "Ashes and jet all hues outshine," and with Emerson's extravagance asks, "Why are not diamonds black and gray?" This is the only bird the Christmas cards have in anything like natural colors. Of its size, (only five inches long), Emerson says:

"I think no virtue goes with size;
The reason of all cowardice
Is, that men are overgrown,
And, to be valiant, must come down
To the titmouse dimension."

The common insect powder is the crushed leaves and stems of *Pyrethrum roseum*, a pretty herb of the Himalayas. The seed may be had from the Department of Agriculture, Washington, D. C.

BOTANY.

A rose bush at Hildesheim, in Hanover, reputed a thousand years old, and planted by Charlemagne, is thirty feet in breadth, thirty-five feet high, and a prolific bloomer.

There are not less than ten thousand American flowering plants known, and probably two thousand undiscovered. The Harvard herbarium is over-run, and Dr. Gray solicits the aid of all botanists. Of these plants Indiana has fifteen hundred.

A common sized tendril of the Virginia creeper will support a weight of six pounds. No wonder they "hang on" in all weathers and climb walls and trees so confidently. This is our true American

Ivy. It is handsomer than the English ivy. It is found in all Indiana woods, and might easily be made to beautify every church and home in the state. It is the chief adornment of several of the Indianapolis churches. Long live *Ampelopsis quinquefolia*—the Five-leaved Virginia Creeper. It need never be confounded with the Poison Ivy which has but three leaflets.

The so-called "annual rings" do not indicate the age of the tree. Dr. A. L. Child found thirty-five to forty separate rings in red maples only ten years old. Estimates of tree age based on the number of growth-rings can not be very accurate.

PERSONAL NOTES.

Professors D. S. Jordan and Charles Gilbert, of the State University, in a late number of the *University Student*, (the college paper), give a list of one hundred and sixty-five papers written by them within the last six years. They mainly relate to the fishes of North America, and comprise upwards of three thousand 8x10 printed pages. These papers have been published gratuitously by various states, and the national government. They represent a vast amount of labor, travel, and study, and are among the most important researches in natural history in the last ten years.

Prof. Charles Gilbert is at Panama collecting fishes, both salt and fresh water, under the direction of the U. S. Fish Commission. He returns in March.

Prof. John Collett's *Geology of Indiana for 1881* is highly spoken of by the *American Naturalist*, which says "the volume is of much educational value." Prof. James Hall, the veteran geologist of New York, devotes a column review to it, commending it highly. This review is published in the *Indianapolis Daily Journal* of Dec. 22d.

Prof. John M. Coulter, of Wabash College, has enlarged the *Botanical Gazette*, commencing with January, volume eighth. Its capacity is doubled, and it is as large and neatly printed as monthlies that cost two dollars instead of one, the price of this. Prof. Charles R. Barnes, of Purdue University, and J. C. Arthur, of Iowa, are associate editors. This is purely a technical and botanical journal, and no live teacher of analytical or physiological botany can afford to be without it. Its subscription list includes the principal botanists of America and Europe.

Miss L. J. Martin, of Indianapolis high school, gave a full course of forty lessons to a junior class in cryptogamic botany with marked success, although but two compound microscopes were available. No text-book was used. The work was mainly objective. Herbariums of forty to fifty species were collected by each pupil,—ferns, mosses, fungi, and the like.

MISCELLANEOUS.

There is no gulf stream in the Gulf of Mexico. The gulf stream does not run in a basin. It is two thousand seven hundred feet deep opposite Florida, and runs from five to eight miles an hour, and has a temperature from 80° to 83° Fahr. The cold water of the Arctic flows inside the gulf stream off the American coast, and also *under* it, falling to a depth of six thousand feet, and with a temperature of 36½°. The best food-fish are found in cold waters, and in this respect the Atlantic coast of North America is greatly favored.

The Atlantic coast is sinking. The encroachments of the sea at Long Branch and Sandy Hook are well known facts, as also the submerged forests of Long Island. New York and Brooklyn will doubtless maintain their position above the sea level through a long era.—*State Geologist, New Jersey.*

The French Academy of Science have awarded M. Pasteur a medal. M. Dumas said in presenting it: "The Academy is elated at your researches; France ranks you among her glories. Science, agriculture, industry, humanity, will feel eternal gratitude to you, and your name will live in their annals among the most illustrious and the most venerated." M. Pasteur rescued the silk industry of France from ruin, studying the parasite that destroyed the worms for ten years, and until his left side was paralyzed. He taught the French people how to preserve their wine from souring and to keep vinegar from losing its acidity; also, how to "vaccinate" against chicken cholera, and *anthrax*, a cattle disease which annually destroys thousands of domestic animals in France and Russia. He is one of the best known and most honored of Frenchmen, both at home and abroad. His honors are not those of French politics or European militarism, but his victories have been gained over microscopic fungi which require the highest power of the microscope to detect and study.

BUSINESS NOTICES.

If you wish to raise a club for the Journal, write for terms to agents.

We call attention to the Review and Normal Term in the Academy of Purdue University, commencing April 3d, and advertised in the last number of the School Journal. With such well-known and able teachers as President White and Profs. Thompson, Barnes, and Smith, none but the best work will be done. This takes the place of the *Purdue Summer Normal School*.

A PORTABLE ELECTRIC LIGHTER.

(*Scientific American, New York, Dec. 16, 1882.*)

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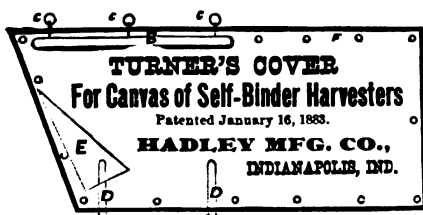
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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

APRIL, 1883.

No. 4.

READING FOR TEACHERS.

GEO. P. BROWN, PRES. STATE NORMAL SCHOOL. ✓

IN the discussion of this subject I shall keep constantly before me the information and training needed by the teacher as *teacher*, and not as an intelligent member of society. But it may be found that, in a very large measure, reading and study which best fits him to teach will best prepare him for social enjoyment and usefulness.

What line of reading and study a teacher shall pursue, must be determined ultimately by what his conception is of the purpose of teaching. If he have a correct and well defined idea of the purpose of the school, he can hardly go wrong in choosing a line of study that shall enable him to pursue a more rational method of realizing that purpose.

I assume that the ultimate purpose of school education is the training of the will. Matthew Arnold says that conduct is three-fourths of life. Schopenhauer declares the normal man to be two-thirds will and one-third intellect. Another says that *doing* is an essential organ of *knowing*. There is a saying commonly received as a maxim, than one must *learn* to do a thing by *doing* it. The resultant of the proper training of the will is character. Character is that spontaneous impulse of the mind to move along certain lines of intellectual and moral action when the conditions that impel to action are supplied. Character directs the conduct

without any conscious choice of the will between contending motives. It is the habit of the mind, a "second nature." But it may be the product of long-continued, persistent and conscientious choices, each conscious act of will leaving behind a residuum of force which helps to direct any subsequent movement of the mind in the same channel, until this residual force has accumulated sufficient strength to direct the mind without any conscious act of volition.

The history of the word "character" is suggestive. Originally the word meant an instrument used to stamp an impression, as a seal; subsequently it was used to name the impression itself; and finally to signify fixed and reliable traits.

Let it be admitted that the training of the will—the formation of character—is the ultimate aim of the school; the next inquiry is as to the process.

A brief and general statement of the process is that the will is trained in school by leading it to direct the intellectual, moral, and physical activities in obedience to the direction of the teacher.

Train the child to obey is the fundamental rule for all education of the will. But obedience implies a subjection of the heart as well as of the will and the intellect. "The teacher's authority must have ascendancy over both heart and mind." Then is obedience implicit; and implicit obedience is the way by which the child must ascend to rational obedience. The child loves to obey when he who commands "has ascendancy over both heart and mind." "He obeys, and, at bottom, admires those who coerce him, if the means be wisely chosen." Happy is it for the child if, when he has ascended from implicit to rational obedience, he shall find that the habits, the character, he has been unconsciously forming are in harmony with the dictates of reason to which he must henceforth be obedient. Shame and everlasting confusion rest upon that teacher, who, having the authority, fails to exercise it to the present and future well-being of the child.

It is needful that we make a more specific statement of the process.

The child is to be led to direct and persistently to control his intellectual activities. This he does by the power of attention, which is here but another name for will. The responsibility of the teacher rests in leading the pupil to attend to the right things and in the right way.

While the commanding purpose of the school is the training of the will, there are many secondary purposes which must be realized. Prominent among these is valuable information. "What knowledge is of most worth?" must, each day, and a hundred times a day, be answered by the teacher. The law prescribes *what* subjects, but it is silent as to *how much* and *what part* of each shall be taught. This must be determined by the teacher in most cases.

Of not less importance is the proper exercise and training of the several intellectual faculties employed in the acquisition of knowledge. "Learning is more useful than knowing. It is the way and not the goal, the work and not the product, the acquiring and not the acquisition, that educates will and character." It is the doing, and not the thing done, that educates every faculty of the mind. But the method of doing must conform to the nature of the mind, and the thing done must be adapted to the stage of the mind's unfolding, if any proper education is to result.

Still another purpose is the realizing in the school of that type or method of instruction which shall best form the mind for future independent activity. This is a purpose hardly inferior to that of training the will to cheerful and ready obedience to the requirements of truth and goodness.

But the way by which this end is to be sought is not yet definitely determined. Our knowledge of it is yet in the stage of opinion. Every person born into the world has a birthright to the possession of an exceedingly rich inheritance. All of value that has been thought or discovered by the race is his, if he can but take it. It is garnered in books which are so cheap that even poverty is no bar to their possession. All of the past is there. Each one, through books, can learn the history of himself as he has come down through the ages. He is what he is,

because of what has been. To know himself he must know this history.

It is also true that every person inherits immense possibilities. There is an infinity of knowledge yet to be quarried, of which the race is ignorant. What has been discovered is only an infinitesimal part of what is waiting for a discoverer.

Now the school is a preparation for life. Shall the type of its method be that which trains the mind to take possession of that inheritance into which it is born, or shall its purpose be to train the mind to the making of new discoveries? Shall the method of the school be the Method of Discovery, or the Method of Instruction? Shall its immediate aim be to train the child to master the printed page, or to master nature? If the former, then text-books are of use; if the latter, these books are not so valuable. If the answer is that it should aim to do both, then which shall hold the principal place, giving character to the method of the school? It is probable that the true method exists in neither extreme, but in a judicious combination of the two.

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is the essential condition of any respectable attainments in the theory of teaching that a person be familiar with the history of the mind's growth, and know the conditions of activity, the processes and the products of each faculty, and the laws in obedience to which these powers act. The book that contains most of what the teacher needs to know, together with much that is of no practical value to him is "Elements of Intellectual Science," by Noah Porter, LL. D., President of Yale College. This book should be studied with discrimination. An analysis of the contents, setting forth those chapters and sections which need to be studied and in what order, would be a valuable service to one not acquainted with the subject or the book. It is not in the purpose of this paper to make such analysis, but I shall be glad to give to any one who may desire it, the result of my experience in teaching this text.

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I have named above what seem to me to be the best professional books for the teacher. He should know what is set forth in these, if he would know the *profession* of teaching. He can work along by "*rule of thumb*," and satisfy the public without such study; but if he is an earnest, conscientious, and intelli-

gent person, he can not satisfy himself without a deeper knowledge of the reasons for his rules of procedure. It is to this class that this paper is addressed.

There is another line of study for the teacher which should aim at general culture. He should know what the inheritance is into which he has been born. This signifies that he must know the achievements of the race in every field of action. He studies history to find out what man has done in combination with his fellows, and how he has done it. He studies literature and art to learn what discoveries have been made in the realm of spirit. He studies science to know what has been discovered in the realm of matter. Thus he comes into possession of his inheritance.

In the line of independent study the following works are suggested. In the following lists there has been no design to do more than to name some of the good books and a few of the great ones with which the teacher should be familiar :

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PROSE.—The Bible; Plato; Bacon; Emerson; Burke; Car-

list: Daniel Webster; Macauley's Essays; Blackie's Self-Culture.

POETRY.—The Bible; Homer; Dante; Shakespeare; Goethe, "Faust"; Milton, "Paradise Lost"; Tennyson, "In Memoriam," "Idyls of the King"; Longfellow, "Evangeline," "Tales of the Wayside Inn"; Lowell; Wordsworth; Bryant; Whittier.

FICTION.—Walter Scott, "Ivanhoe," "Heart of Midlothian"; Goethe, "Wilhelm Meister"; Victor Hugo, "Les Miserables"; Dickens, "David Copperfield," "Dombey and Son," "Old Curiosity Shop," "Bleak House"; George Elliot, "Adam Bede," "Daniel Deronda," "Romola"; Thackeray, "Vanity Fair"; Hawthorne, "The Scarlet Letter," "Marble Faun"; Irving, "Bracebridge Hall"; Bulwer, "The Historical Novels."

POPULAR WORKS IN SCIENCE.—"Origin of Species," Darwin; "Man's Place in Nature," Huxley; "Principles of Human Physiology," Carpenter; "Mental Physiology," Carpenter; "Sound, Heat, Light," Tyndall; "Elements of Geology," LeComte; "Popular Astronomy," Newcombe; "International Science Series," D. Appleton & Co.; "American Science Series," Henry Holt & Co.; "Comparative Zoology," James Oron. —*State Superintendent's Report.*

A CHAPTER ON CLEANLINESS IN THE SCHOOL ROOM.

T. W. FIELDS, RIDGEVILLE, IND.

A NATION is civilized in proportion to the amount of soap it uses," is a saying that has been attributed to Liebig, the German chemist. We can not vouch for the accuracy of the authority, but our own observation among individuals and families, goes far toward confirming our belief in the correctness of the declaration.

Most certain are we that in school districts where great indifference is manifested in regard to personal attention, the people lack correspondingly in other qualities of refinement. When the same disregard is plainly noticeable inside the school-room

and on the school premises, it does not speak well for the people of the district nor the teacher. Reform is necessary in this district. The first step toward a higher refinement is attention to cleanliness. The teacher should be the prime mover in this enterprise. A few judicious efforts will accomplish marvels even during one term of school. We call attention to a few points that the young teacher who is desirous of doing his duty in this matter, may know how to begin and what to look for.

Cleanliness of Person.—The teacher who finds it necessary to institute reform in the matter of cleanliness can, perhaps, insist with greater authority to start with, on sufficient attention being paid to the person. His own appearance should be an example in this particular entirely beyond reproach. Let him first provide the school with water-basin, towels, soap, glass and comb. If the school trustees will furnish them, so much the better. He should then tell his pupils in a general way what he expects of them, and when he finds one who is negligent in the matter, he should require that one to properly prepare himself for school.

Attention to the hands, nails, face, teeth, neck, and ears, are special points for the teacher's observation. The hair must not be overlooked, for sometimes the little folks are in such hurry to get to school that they "forget" (?) their morning toilet. The use of cils should be discouraged as dressing for the hair by either girls or boys.

The clothing comes in next for inspection. It will hardly do to cast any reflection on the condition of wearing apparel as it comes from home, but the teacher can prohibit plays that soil and otherwise disarrange the clothing. He can see that dust and mud are removed. He may tell them how particular soldiers are when on parade, and thus beget a pride in them to keep clean. Patched or thread-bare clothes should have no disrespectful allusion made to them by the teacher. No criticism on the kind of clothing should be made or allowed. Train the children to keep their shoes and boots clean. Keep scrapers at the door, blacking and brushes in the hall, and they will not be slow to learn their uses.

The Desk.—Every pupil should be made responsible for the condition of his desk and the floor near where he sits. If pupils tear up paper and put it in their desks, or throw it on the floor, require them to remove it. If more than the average amount of mud is found under their desk, require them to sweep it out. Show them how, and then require their desks to be kept in order. If they purposely or carelessly soil their desk with ink, or bedaub it with grease, or anything else, let them know that they are expected to clean it. Prompt action on the part of the teacher will prevent wantonness in marking the desks with pencil, knife, or other instruments.

Keeping the Books Clean.—Books should be used but not abused. Every new book that is purchased by the pupils should be substantially covered. The teacher ought to show the pupils how to cover their own books. The teacher may write the pupil's name in a blank leaf, with date and residence, and then furnish any other writing therein. The blank leaves of school books are not autograph albums, for Sarah Ann, Susan Jane, or James Henry to write loving verses of *friendship* in, and the pupils should so learn. Do not permit them to write all through their books or draw caricatures, etc., in them. When such things are found have them erased. Tell the children that you shall look for it and what will be the consequence if anything of the kind is found in their books.

There is still another habit that should be broken up in school, that of "spitting on slates," and rubbing it in with the hand. Excessive expectoration is hurtful to good digestion. And the habit of removing the work from the slate this way is too filthy to be fully considered by one with a weak stomach. It is nauseating. If the pupils can not procure slate sponges, then get cloths and keep them wet with water for the purpose.

Keeping the House Clean.—In country schools where the teacher is often his own janitor, the house is under his care. It is then his business to see that it is regularly and carefully swept and dusted. The walls should be whitewashed each year, the windows cleaned, the casing should be scoured, and the floor scrubbed and mopped. The stove will need polishing

as often as once a month. Where pupils bring their dinners to school, they should be cautioned about throwing pieces of meat, crusts of bread, egg-shells, bones, and other things on the floor. Neither should they make a pool of water on the floor by the water-pail. No pencil marks on the walls, furniture, maps, charts, or on the stove, should be allowed. Ugly scrawls on the black-board walls are not permissible.

On the Premises.—There should be walks made to the out-houses, to the gates, the play-ground, and to the wood-pile. All unnecessary boards, sticks, weeds, and other trash should be removed from the grounds, and the premises be kept clean by the pupils.

Such training is most excellent discipline for growing hearts and minds. The influence is soon felt at home. A juster appreciation of the subject is felt by parents, and front yards are put in better shape, houses are kept tidier, and pupils soon come to school looking neater and sweeter, happier and healthier for this elevating influence of CLEANLINESS.

HERBERT SPENCER'S THEORY OF EDUCATION.

BY E. R. SILL.

PROBABLY nine-tenths of the popular sophistries on the subject of education would be cleared away by clarifying the conception of this word Nature. We hear the "natural method" eulogized, and the "natural man" is appealed to from morbid and unnatural conditions of living. But what is the natural method? It is of little value as an arbiter, unless it means that method which the sanest sense and the ripest experience of man has approved. And who is the natural man? Plainly, not the savage, not the undeveloped brute, but the man as he was meant by Nature to be: completely equipped in mind as well as in body; equipped, moreover, with the highest social and political arrangements, including a wise system of education. That is in the truest sense, the only rational sense for the purposes of such a discussion, the natural method, the natural

because of what has been. To know himself he must know this history.

It is also true that every person inherits immense possibilities. There is an infinity of knowledge yet to be quarried, of which the race is ignorant. What has been discovered is only an infinitesimal part of what is waiting for a discoverer.

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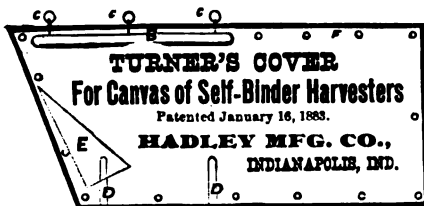
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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

APRIL, 1883.

No. 4.

READING FOR TEACHERS.

GEO. P. BROWN, PRES. STATE NORMAL SCHOOL. ✓

IN the discussion of this subject I shall keep constantly before me the information and training needed by the teacher as *teacher*, and not as an intelligent member of society. But it may be found that, in a very large measure, reading and study which best fits him to teach will best prepare him for social enjoyment and usefulness.

What line of reading and study a teacher shall pursue, must be determined ultimately by what his conception is of the purpose of teaching. If he have a correct and well defined idea of the purpose of the school, he can hardly go wrong in choosing a line of study that shall enable him to pursue a more rational method of realizing that purpose.

I assume that the ultimate purpose of school education is the training of the will. Matthew Arnold says that conduct is three-fourths of life. Schopenhauer declares the normal man to be two-thirds will and one-third intellect. Another says that *doing* is an essential organ of *knowing*. There is a saying commonly received as a maxim, than one must *learn* to do a thing by *doing* it. The resultant of the proper training of the will is character. Character is that spontaneous impulse of the mind to move along certain lines of intellectual and moral action when the conditions that impel to action are supplied. Character directs the conduct

without any conscious choice of the will between contending motives. It is the habit of the mind, a "second nature." But it may be the product of long-continued, persistent and conscientious choices, each conscious act of will leaving behind a residuum of force which helps to direct any subsequent movement of the mind in the same channel, until this residual force has accumulated sufficient strength to direct the mind without any conscious act of volition.

The history of the word "character" is suggestive. Originally the word meant an instrument used to stamp an impression, as a seal; subsequently it was used to name the impression itself; and finally to signify fixed and reliable traits.

Let it be admitted that the training of the will—the formation of character—is the ultimate aim of the school; the next inquiry is as to the process.

A brief and general statement of the process is that the will is trained in school by leading it to direct the intellectual, moral, and physical activities in obedience to the direction of the teacher.

Train the child to obey is the fundamental rule for all education of the will. But obedience implies a subjection of the heart as well as of the will and the intellect. "The teacher's authority must have ascendancy over both heart and mind." Then is obedience implicit; and implicit obedience is the way by which the child must ascend to rational obedience. The child loves to obey when he who commands "has ascendancy over both heart and mind." "He obeys, and, at bottom, admires those who coerce him, if the means be wisely chosen." Happy is it for the child if, when he has ascended from implicit to rational obedience, he shall find that the habits, the character, he has been unconsciously forming are in harmony with the dictates of reason to which he must henceforth be obedient. Shame and everlasting confusion rest upon that teacher, who, having the authority, fails to exercise it to the present and future well-being of the child.

It is needful that we make a more specific statement of the process.

The child is to be led to direct and persistently to control his intellectual activities. This he does by the power of attention, which is here but another name for will. The responsibility of the teacher rests in leading the pupil to attend to the right things and in the right way.

While the commanding purpose of the school is the training of the will, there are many secondary purposes which must be realized. Prominent among these is valuable information. "What knowledge is of most worth?" must, each day, and a hundred times a day, be answered by the teacher. The law prescribes *what* subjects, but it is silent as to *how much* and *what part* of each shall be taught. This must be determined by the teacher in most cases.

Of not less importance is the proper exercise and training of the several intellectual faculties employed in the acquisition of knowledge. "Learning is more useful than knowing. It is the way and not the goal, the work and not the product, the acquiring and not the acquisition, that educates will and character." It is the doing, and not the thing done, that educates every faculty of the mind. But the method of doing must conform to the nature of the mind, and the thing done must be adapted to the stage of the mind's unfolding, if any proper education is to result.

Still another purpose is the realizing in the school of that type or method of instruction which shall best form the mind for future independent activity. This is a purpose hardly inferior to that of training the will to cheerful and ready obedience to the requirements of truth and goodness.

But the way by which this end is to be sought is not yet definitely determined. Our knowledge of it is yet in the stage of opinion. Every person born into the world has a birthright to the possession of an exceedingly rich inheritance. All of value that has been thought or discovered by the race is his, if he can but take it. It is garnered in books which are so cheap that even poverty is no bar to their possession. All of the past is there. Each one, through books, can learn the history of himself as he has come down through the ages. He is what he is,

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A teacher's reading should follow two distinct lines;—one toward the goal of professional knowledge and skill, and the other having for its end general culture.

Professional knowledge is the knowledge of the theory of teaching; professional skill is a practical knowledge of the art of teaching. The theory or science of teaching is a derived science, having for its basis the science of the human mind. It

is the essential condition of any respectable attainments in the theory of teaching that a person be familiar with the history of the mind's growth, and know the conditions of activity, the processes and the products of each faculty, and the laws in obedience to which these powers act. The book that contains most of what the teacher needs to know, together with much that is of no practical value to him is "Elements of Intellectual Science," by Noah Porter, LL. D., President of Yale College. This book should be studied with discrimination. An analysis of the contents, setting forth those chapters and sections which need to be studied and in what order, would be a valuable service to one not acquainted with the subject or the book. It is not in the purpose of this paper to make such analysis, but I shall be glad to give to any one who may desire it, the result of my experience in teaching this text.

One of the best books on the science of school education that I have read is "Education as a Science," by Alexander Bain, of Aberdeen University, Scotland. The reader needs to be on his guard against accepting too implicitly some of the psychological doctrines set forth, but the book is very suggestive and valuable.

On the philosophy of education in general, there is no book equal in merit to "Rosenkranz's Pedagogics," published by D. Appleton & Co., New York. The value of this book has been greatly increased by an addition of seventy-six pages in the form of an appendix, containing a paraphrase of the first part, and an essay on Educational Psychology, by Wm. T. Harris, LL. D.

There are but few books printed in English on the History of Education.

The article, Education, in the new edition of the *Encyclopedia Britannica*, by Oscar Browning, is an admirable short history of "Educational theories in the chief crises of their development." Also, a later book by the same author entitled, "History of Educational Theories."

This article has been reprinted in a little book by Professor W. H. Payne, of Michigan University, making it convenient of access to all teachers. An appropriate book to follow this is

"*Essays on Educational Reformers*," by R. H. Quick, LL. D., Lecturer on Education in the University of Cambridge, England. The fullest history of education in the English language is to be found in Henry Barnard's *Educational Journal*. This work is very large and too expensive for most teachers.

"*The Cyclopædia of Education*," by Kiddle & Schem, New York, is a work of great value.

A little book entitled "*Some Thoughts on Education*," by John Locke, is a book of intrinsic value and remarkable for the influence it has had in molding modern education. A small book by Herbert Spencer, entitled "*Education: Intellectual, Moral, and Physical*," is widely read and is very suggestive.

There are numerous books on the art of teaching. That a science grows from the corresponding art is shown by the numerous publications setting forth the "*How to Teach*," and the few, as yet, that undertake to formulate a "*Science of Teaching*." Among the most valuable books on methods are: "*Methods of Teaching*," by John Swett; "*Methods of Instruction*," by J. P. Wickersham; "*On Primary Instruction in Relation to Education*," by S. S. Lourie, of Edinburgh University; and "*Theory and Practice of Teaching*," by David P. Page.

"*Outlines of Educational Doctrine*," is a small book recently published, from the pen of W. H. Payne, A. M., of Michigan University. It is a very valuable contribution to educational literature, and should be studied by every teacher.

Among the best books published on "*School Supervision*" and "*School Economy*," are those by Prof. W. H. Payne and J. P. Wickersham.

There is a flood of professional magazine literature printed each month, some of which is valuable, but much of it is not worth the reading. A bi-monthly magazine published in Boston, entitled "*Education*," is a magazine of great value.

I have named above what seem to me to be the best professional books for the teacher. He should know what is set forth in these, if he would know the *profession* of teaching. He can work along by "*rule of thumb*," and satisfy the public without such study; but if he is an earnest, conscientious, and intelli-

gent person, he can not satisfy himself without a deeper knowledge of the reasons for his rules of procedure. It is to this class that this paper is addressed.

There is another line of study for the teacher which should aim at general culture. He should know what the inheritance is into which he has been born. This signifies that he must know the achievements of the race in every field of action. He studies history to find out what man has done in combination with his fellows, and how he has done it. He studies literature and art to learn what discoveries have been made in the realm of spirit. He studies science to know what has been discovered in the realm of matter. Thus he comes into possession of his inheritance.

In the line of independent study the following works are suggested. In the following lists there has been no design to do more than to name some of the good books and a few of the great ones with which the teacher should be familiar :

HISTORY.—The Bible; Rawlinson's "Ancient Monarchies"; Freeman's "Historical Course," embracing the History of Greece, of Rome, of France, of Italy, of Germany, of England, and of Scotland; Plutarch's "Lives"; Grote's "History of Greece"; Gibbon's "History of Rome"; "The Intellectual Development of Europe," by Dr. Draper; "The Philosophy of History," by Hegel; "The Fifteen Decisive Battles," by Creasy; "Ten Great Religions," by Jas. Freeman Clarke; "History of the Reformation," by D'Aubigne; "The Rise and Progress of the English Constitution," by Creasy; "A Short History of England," by Greene; "A History of Our Own Time," by Justin McCarty; "Life of Columbus," by Washington Irving; "Life of Washington," by Washington Irving; "Constitutional History of the United States," by Von Holt; "Lectures on the Study of History," by Goldwin Smith.

The field of literature is a large one. It may aid in the classification of the books to be read, to separate it into the three divisions of prose, poetry, and fiction :

PROSE.—The Bible; Plato; Bacon; Emerson; Burke; Car-

DE: Daniel Webster; Macauley's Essays; Blackie's Self-Cul-

POETRY.—The Bible; Homer; Dante; Shakespeare; Goethe, "Faust"; Milton, "Paradise Lost"; Tennyson, "In Memoriam," "Idyls of the King"; Longfellow, "Evangeline," "Tales of the Wayside Inn"; Lowell; Wordsworth; Bryant; Whittier.

FICTION.—Walter Scott, "Ivanhoe," "Heart of Midlothian"; Goethe, "Wilhelm Meister"; Victor Hugo, "Les Misérables"; Dickens, "David Copperfield," "Dombey and Son," "Old Curiosity Shop," "Bleak House"; George Elliot, "Adam Bede," "Daniel Deronda," "Romola"; Thackeray, "Vanity Fair"; Hawthorne, "The Scarlet Letter," "Marble Faun"; Irving, "Bracebridge Hall"; Bulwer, "The Historical Novels."

POPULAR WORKS IN SCIENCE.—"Origin of Species," Darwin; "Man's Place in Nature," Huxley; "Principles of Human Physiology," Carpenter; "Mental Physiology," Carpenter; "Sound, Heat, Light," Tyndall; "Elements of Geology," LeComte; "Popular Astronomy," Newcombe; "International Science Series," D. Appleton & Co.; "American Science Series," Henry Holt & Co.; "Comparative Zoology," James Orton.—*State Superintendent's Report.*

A CHAPTER ON CLEANLINESS IN THE SCHOOL ROOM.

T. W. FIELDS, RIDGEVILLE, IND.

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Most certain are we that in school districts where great indifference is manifested in regard to personal attention, the people lack correspondingly in other qualities of refinement. When the same disregard is plainly noticeable inside the school-room

and on the school premises, it does not speak well for the people of the district nor the teacher. Reform is necessary in this district. The first step toward a higher refinement is attention to cleanliness. The teacher should be the prime mover in this enterprise. A few judicious efforts will accomplish marvels even during one term of school. We call attention to a few points that the young teacher who is desirous of doing his duty in this matter, may know how to begin and what to look for.

Cleanliness of Person.—The teacher who finds it necessary to institute reform in the matter of cleanliness can, perhaps, insist with greater authority to start with, on sufficient attention being paid to the person. His own appearance should be an example in this particular entirely beyond reproach. Let him first provide the school with water-basin, towels, soap, glass and comb. If the school trustees will furnish them, so much the better. He should then tell his pupils in a general way what he expects of them, and when he finds one who is negligent in the matter, he should require that one to properly prepare himself for school.

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The Desk.—Every pupil should be made responsible for the condition of his desk and the floor near where he sits. If pupils tear up paper and put it in their desks, or throw it on the floor, require them to remove it. If more than the average amount of mud is found under their desk, require them to sweep it out. Show them how, and then require their desks to be kept in order. If they purposely or carelessly soil their desk with ink, or bedaub it with grease, or anything else, let them know that they are expected to clean it. Prompt action on the part of the teacher will prevent wantonness in marking the desks with pencil, knife, or other instruments.

Keeping the Books Clean.—Books should be used but not abused. Every new book that is purchased by the pupils should be substantially covered. The teacher ought to show the pupils how to cover their own books. The teacher may write the pupil's name in a blank leaf, with date and residence, and then forbid any other writing therein. The blank leaves of school books are not autograph albums, for Sarah Ann, Susan Jane, or James Henry to write loving verses of *friendship* in, and the pupils should so learn. Do not permit them to write all through their books or draw caricatures, etc., in them. When such things are found have them erased. Tell the children that you shall look for it, and what will be the consequence if anything of the kind is found in their books.

There is still another habit that should be broken up in school, that of "spitting on slates," and rubbing it in with the hand. Excessive expectoration is hurtful to good digestion. And the habit of removing the work from the slate this way is too filthy to be fully considered by one with a weak stomach. It is nauseating. If the pupils can not procure slate sponges, then get cloths, and keep them wet with water for the purpose.

Keeping the House Clean.—In country schools where the teacher is often his own janitor, the house is under his care. It is his business to see that it is regularly and carefully swept and dusted. The walls should be whitewashed each year, windows cleaned, the casing should be scoured, and the floor scrubbed and mopped. The stove will need polishing

as often as once a month. Where pupils bring their dinners to school, they should be cautioned about throwing pieces of meat, crusts of bread, egg-shells, bones, and other things on the floor. Neither should they make a pool of water on the floor by the water-pail. No pencil marks on the walls, furniture, maps, charts, or on the stove, should be allowed. Ugly scrawls on the black-board walls are not permissible.

On the Premises.—There should be walks made to the out-houses, to the gates, the play-ground, and to the wood-pile. All unnecessary boards, sticks, weeds, and other trash should be removed from the grounds, and the premises be kept clean by the pupils.

Such training is most excellent discipline for growing hearts and minds. The influence is soon felt at home. A juster appreciation of the subject is felt by parents, and front yards are put in better shape, houses are kept tidier, and pupils soon come to school looking neater and sweeter, happier and healthier for this elevating influence of CLEANLINESS.

HERBERT SPENCER'S THEORY OF EDUCATION.

BY E. R. SILL.

PROBABLY nine-tenths of the popular sophistries on the subject of education would be cleared away by clarifying the conception of this word Nature. We hear the "natural method" eulogized, and the "natural man" is appealed to from morbid and unnatural conditions of living. But what is the natural method? It is of little value as an arbiter, unless it means that method which the sanest sense and the ripest experience of man has approved. And who is the natural man? Plainly, not the savage, not the undeveloped brute, but the man as he was meant by Nature to be: completely equipped in mind as well as in body; equipped, moreover, with the highest social and political arrangements, including a wise system of education. That is in the truest sense, the only rational sense for the purposes of such a discussion, the natural method, the natural

order of studies, the natural course of exercises, which the foremost Englishman—not which the lowest Fijian—would approve and adopt.

There is space to notice but one or two instances in which the false conception of Nature leads to error in this treatise; and first in the objection to abstract studies. Mr. Spencer asserts that since the natural activities of the mind in early youth are concrete, therefore the whole education of this period should be concrete. Certainly, that is the method of wild nature, and wild nature never gets beyond that point. The uneducated man remains always, in this respect, a child, incapable of abstract thought. What we wish to do is to develop out of this crude, unnatural Nature the truly natural man,—the man as Nature meant him to be, with the power and the habit of abstract conception and reasoning. Though we follow the order, we need not follow the pace, of wild nature. The sooner the boy can be brought to read intellectual books, and to grasp complex subjects, easily and quietly, without strain or precocity or hindrance to the physical development, the more of a man will he make.

So, again, Mr. Spencer's words are often quoted in support of the attractive doctrine that education shall give boys to do only that which they choose to do. Their diet, according to this theory, would be plum-cake and jam, and their reading would likewise be whatever was spiciest to the mental palate and easiest of mastication. Every parent and teacher knows something of what evils would follow this system, from his observation of the effects of the dime novel and of our juvenile literature in general. A young person had much better read Shakespeare and Mr. Spencer. Every teacher, at least, knows also how this theory has run into an absurd extreme in "oral teaching" and the "object-lesson." A boy does not need to be fed forever with a spoon. The time comes when he must learn to get his knowledge in the way that every educated man must always get it,—from the written page, and from self-controlled, persistent, laborious thought.—*February Atlantic.*

THE TOOLS OF THOUGHT.

WM. T. HARRIS.

THE five elementary branches are of infinitely more importance in a course of education than any other can possibly be—for this reason: The pupil who is taught how to master these subjects, is at the same time taught to master all branches of human learning—and this is just the work in which every one of the three hundred thousand teachers in the United States is engaged.

This mastery of the mind gives us also the mastery over the realms of nature as well, and makes possible all communication between man and man.

These tools of thought are:

- I. Reading.
- II. Arithmetic.
- III. Geography.
- IV. Grammar.
- V. History.

By the first of these the pupil issues forth from the circumscribed life of the senses in which he is confined, and finds himself in the community of the world at large, so far as his language extends. He is not limited by space; for the printed page of the text-book and the newspaper gives him a survey of the life of the globe. He is not limited by time; for the libraries open their doors and he associates with, and listens to, Socrates and Plato, Confucius and Zoroaster, and no empty gossip escapes from their lips! Faint echoes come down to him from the Chaldean oracles, and the Phœnician or Cushite civilization—most ancient of all. Not merely this: he can write his own thought, and thus be present to others far separated by time and space. This branch is the alphabet of all others, and leads to them.

By the second of these studies he becomes measurer of numerical quantity, and masters the practical side of exchange. The exchange of thoughts and ideas through reading and writing, is extended by arithmetic to a practical ability to exchange food, clothing, and shelter.

By the third he comes to realize his special relation to the rest of the world. He contributes to the world and receives from it, through commerce. The world through this relation is all a part of the patrimony of each individual. His farm, trade or profession furnishes him certain things through the medium of certain activities; so likewise does the whole world.

Every civilized man is interested in the cotton crop of Texas, the wheat crop of Minnesota, or the iron crop of Missouri, or the manufactures of England and Massachusetts, just as really, though not so really, as the farmer of Texas, the miner of Missouri, the manufacturer of Manchester or Lowell. Thus geography is one of the indispensable branches of education.

Grammar gives to the pupil the first consciousness of the mind itself as instrument. The formation of language exhibits the stages by which pure intellect becomes master of itself. The profound analysis and superior grasp of thought which grammar gives, as compared with mathematics and physical sciences, for example, has long been noticed by educators. It is emphatically a culture study. It marks the educated man from the illiterate; the former uses language with conscious skill, the latter without it.

History introduces the learner into his past existence, in the same way as geography into his outside (and out of sight) existence. For the precedent conditions of the individual belong to and are a part of his actual existence.

"Man! know thyself!" By self-knowledge the individual traces forth out of his immediate sensations (within whose narrow sphere he is as a brute, knowing neither good nor evil; for these are relations) and traces out his existence through the regions of space which it involves, and the æons of time which are its conditions.

He finds that his existence is no private, isolated affair, but a process—a process which has become through time, and is a process embracing "all nations and all climes."

It can be more practical than this?

It is what our teachers are doing. Can you over-estimate the importance of this work?

Drop it out, and the pall of night, the darkness of ignorance settles down over all of us.

Curtail it, and you limit both the power and usefulness, as well as the life of every citizen.—*Am. Journal.*

UTILITY.

J. W. NICHOLS, WINCHESTER.

THE period of childhood is naturally one of inquiry. The youthful mind follows every action of its superiors with the question, "What for?" It delights in the explanation of causes. These questions do not always merit a reply, but they teach us the nature of children's necessities. The *why* of school work is sadly neglected. Teachers store the minds of their pupils with knowledge, without giving them an idea of the purpose, or use of such knowledge. Some receive it patiently and carelessly, as they would receive the tools of all the manual arts, with no knowledge of their use. Others take little interest in their lessons, and refuse to study some of the branches. They have never been shown the practical utility of these studies. The teacher may overrule their objection, but he will accomplish little good against the pupil's judgment. If a boy fails to see wherein a study will be of use to him in actual life, the great stimulus, thirst, is wanting.

The teacher must do a great deal of reasoning and explaining; the judgment, as well as the understanding, must be enlightened. He must answer such questions as the following: "What is the use of Longitude and Time? What is the use of learning the elementary sounds? What is the use of parsing?" Not only should he answer such questions that are asked, but he should anticipate, and answer, a thousand similar ones. Every new principle should have its use and relative value shown. The pupils should feel and know that everything learned at school is filling them with capabilities for higher usefulness and enjoyment.

This idea of utility, and fitness of things, should be set forth in school management. Teachers are often too autocratic in their discipline: and thereby defeat every possibility of self-government on the part of the pupil. There are sound, common-sense reasons for the observance of all the rules necessary to a good school: and the teacher who sees that these are understood by his pupils, will have little trouble from disobedience. Many a bad boy has been wholly reformed by a few words of sensible reasoning. He had never before thought of the real, practical advantage of good conduct.

Let the teacher keep before his school the utility and blessings of education and a life of upright conduct, and he has logic that none can withstand.

CHEESE VS. CHILDREN.—The superintendent of a great and populous state laments the weakness of the district school and recommends consolidation, and in complimentary terms infers that, as the people have accepted professional cheese and butter makers, they will soon be wise enough to call into their rural schools none but professional educators. It is evident in this case that cheese has the start of the children.

The statement openly and emphatically made, that the old district school was better than its successor of to-day, is not so wild as it sounds. In many cases, the school of years ago, with its large number, its spelling matches, its debating society, the intellectual center of a neighborhood, has dwindled to a state of feebleness unpleasant to contemplate. The well-to-do boys and girls seek the town school, leaving the home school to the very young and the poorer children, to be presided over by a youthful member of the large Micawber family.

Few young men of force and ambition now make the district school a stepping-stone to a broader and more exacting life. They find better support in their struggle to rise in other directions. It is doubtful whether it will be said of the Garfields of the next generation that on their way upward they honored and blessed the common school as instructors.—*Min. Ed. Jour.*

THE ELEMENTS OF GOVERNING POWER.

BY E. E. SMITH.

THE VINE AND ITS BRANCHES. ✓

IN the previous article we spoke of the striking resemblance between the relations of the vine to its branches and of the teacher to his pupils. We shall also find a marked similarity between these—the vine and the teacher—in their sources of strength and influence.

1. *Good Soil—Thorough Education.*—The stronger the soil, the more vigorous the growth. The profession of teaching is progressing. The acquirements of the teacher should progress also. The wages are not increased proportionally, it is true. The teacher is not to be governed by the law of wages, but by the law of responsibility and usefulness. He should get the most liberal education that his circumstances will allow—not only special but general. The teacher, of all persons, can least afford to travel in a rut, especially a single tracked one. The rut will become a gully whose sides are so steep and high that they both shut out sunshine and throw shadows.

Good scholarship gives resources from which to draw in emergencies, affords abundant means of illustration, forearms for those difficulties which are constantly springing up on account of the relation which each branch taught bears to general education,—in short, enables the teacher to feel himself master of the situation.

But the teacher's knowledge must have a growth as well as the pupil's. Otherwise, like a fund in bank, continual drafts will soon exhaust it; or, like an oft-told tale, it becomes stale and unprofitable. As Dr. Arnold once said to an inquiring friend, "I prefer that my pupils should drink from a running stream rather than a stagnant pool,"—so the teacher should be fresh—full of the subject-matter—alive to all its minor details as well as to its general relations, so that he may know the objects of each day's work and when they have been accomplished. He thus makes the recitation livelier, feels freer himself, is not

lisle; Daniel Webster; Macauley's Essays; Blackie's Self-Culture.

POETRY.—The Bible; Homer; Dante; Shakespeare; Goethe, "Faust"; Milton, "Paradise Lost"; Tennyson, "In Memoriam," "Idyls of the King"; Longfellow, "Evangeline," "Tales of the Wayside Inn"; Lowell; Wordsworth; Bryant; Whittier.

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A CHAPTER ON CLEANLINESS IN THE SCHOOL ROOM.

T. W. FIELDS, RIDGEVILLE, IND.

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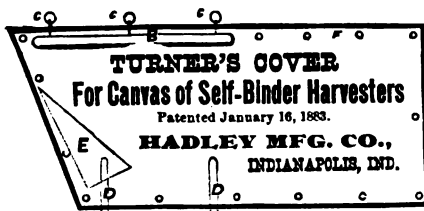
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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

APRIL, 1883.

No. 4.

READING FOR TEACHERS.

GEO. P. BROWN, PRES. STATE NORMAL SCHOOL. ✓

IN the discussion of this subject I shall keep constantly before me the information and training needed by the teacher *as teacher*, and not as an intelligent member of society. But it may be found that, in a very large measure, reading and study which best fits him to teach will best prepare him for social enjoyment and usefulness.

What line of reading and study a teacher shall pursue, must be determined ultimately by what his conception is of the purpose of teaching. If he have a correct and well defined idea of the purpose of the school, he can hardly go wrong in choosing a line of study that shall enable him to pursue a more rational method of realizing that purpose.

I assume that the ultimate purpose of school education is the training of the will. Matthew Arnold says that conduct is three-fourths of life. Schopenhauer declares the normal man to be two-thirds will and one-third intellect. Another says that *doing* is an essential organ of *knowing*. There is a saying commonly received as a maxim, than one must *learn* to do a thing by *doing* it. The resultant of the proper training of the will is character. Character is that spontaneous impulse of the mind to move along certain lines of intellectual and moral action when the conditions that impel to action are supplied. Character directs the conduct

MISCELLANY.

PORTLAND.—The schools show a total enrollment of 562, and are doing well. Morgan Caraway is superintendent.

A joint meeting of the teachers of Williams and Defiance counties, Ohio, and De Kalb and Steuben counties, Ind., was held at Butler, Ind., Feb. 16th and 17th.

HAMILTON COUNTY.—The school board in this county is well organized, and the schools are well organized. The examination questions for pupils, sent out by Supt. A. H. Morris, indicate a good standard.

FRANKLIN.—A gentleman who recently visited the Franklin schools makes a favorable report. He says the schools are not equally good, some being very much better than others. One recitation is reported, "the best I ever heard in my life."

TERRE HAUTE.—The Report of the Terre Haute schools for 1881-2 is one of the most tastefully arranged and printed manuals we have yet seen. It is full, and shows the schools in excellent working order. Supt. W. H. Wiley is at the helm, and keeps the school ship in the current of progress.

The annual meeting of the Department of Superintendency of the National Educational Association met in Washington, D C., Feb. 20th. The programme (incomplete) of the meeting was not received at Indianapolis till Feb 14th, making the notice entirely too short. N. A. Calkins, of New York City, was president.

CAMBRIDGE CITY.—A new variety of public entertainment was recently inaugurated by the public schools of Cambridge City, in the shape of a Reading Contest. Readings were given from the Third Grade up, and prizes were awarded. This is certainly a good method of stimulating pupils to greater efforts in this direction, and to interest parents.

DELAWARE COUNTY.—The board of education of Delaware county seems to be one of the most active in the state. At a meeting held February 19th, they discussed fully the law under which the enumeration is taken, had reports from committees on various subjects, organized a plan for a general canvass for the flood sufferers, etc., etc., and telegraphed for State Supt. Bloss to address them and the teachers and citizens, Saturday, Feb. 24th. He accepted the invitation. Supt. Clancey is the director.

NEWTON COUNTY.—The Newton county teachers' association, held at Kentland, February 16th and 17th, was a success in spite of the

stormy weather and high waters. Supt. B. F. Johnson, of Benton county, was with us on both days, and assisted very materially in the work. He read a very able paper on the "Objects and Methods of Government." Our teachers showed their appreciation of his work by a vote of thanks. Many other visitors were present, among whom was J. W. Caldwell, of Sheldon, Ill.

A committee of three, viz, N. F. Jenkins, J. J. Eckman, and Wm. M. Sinclair, was appointed to meet the teachers of Northwestern Indiana at Monticello (time to be determined), for the purpose of perfecting a permanent organization of a Northwestern Indiana Teachers' Association. March 9th is suggested for preliminary meeting. Let the good work begun go on.

W. H. H.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.

Washington, Ind., April 4, 5, 6, 1883.

WEDNESDAY, April 4—Afternoon. 1. Visit schools. 2. Arrange Exposition work. *Evening*—1. Address of welcome, by Mayor Arthur Beddoe. 2. Response, J. R. Trisler, Lawrenceburgh. 3. Inaugural of President, H. B. Hill, Aurora. 4. Business. 5. Social.

THURSDAY, April 5.—1. "Some Cyphering at the Country School Problem," J. C. Macpherson, Supt. Wayne Co. Discussion opened by H. A. Yeager, Supt. Gibson Co. 2. The Coming Superintendent, J. S. Hall, Supt. Crawford Co. Discussion opened by J. R. Hart, Supt. Switzerland Co., and A. P. Carr, Supt. Clark Co. *Afternoon.* 1. Appointment of Nominating Committee, and fixing time and place of next meeting. 2. Culture, and the Influences which Cause its Growth, D. S. Kelley, Supt. Jeffersonville. Discussion opened by W. E. Lugenbeel, Pres. Southern Ind. Nor. College. 3. Schools of New Harmony in "Community Times," Col. Richard Owen, New Harmony. 4. Principles that prevail in Methods of U. S. History, Prof. Howard Sandison, State Normal School. A Lesson with Pupils Illustrative of these Principles, Prof. A. L. Wyeth, Prin. of Training School, State Normal. *Evening*—1. The Limestone of Indiana, Prof. John L. Campbell, Wabash College. 2. "Antietam," Prof. John M. Bloss, Indianapolis.

FRIDAY.—1. Business. 2. Language Lesson with Class, Miss Ophelia H. Roddick, Washington. 3. The Work of the Primary Teacher, Miss Kate Huron, Danville Normal. Discussion opened by H. B. Jacobs, New Albany, and A. J. Snook, Princeton. 4. Sauveteur's Method, Miss Ella Munson, Mitchell. Discussion opened by J. A. Marlow, Supt. Sullivan Co. 5. What must be Done with the Growing Hoodlum Element, James G. May, Salem. Discussion. *Afternoon*—1. Experiments in Natural Philosophy, Prof. C. E. McVay,

Cincinnati, O. 2. Supplementary Lesson in U. S. History, Prof. A. L. Wyeth, State Normal. Discussion of Prof. Sandison's paper and Prof. Wyeth's Lesson, opened by C. F. Coffin, Supt. New Albany. 3. Reports of Committees. *Evening*—1. Address, E. E. White, Pres. Purdue University. 2. Social.

SATURDAY.—1. Visit Coal Mine and Indian Mounds.

Exposition of School Work.—Teachers are requested to bring such of their school work as can be conveniently placed on exhibition, and space will be assigned for it. Every one can contribute one paper or more to this new and valuable feature of the association.

Hotels.—The principal hotels will make reductions to those who present certificates of membership, Hyatt Hotel, \$1.50 per day; Meredith House, \$1.00 per day.

Railroads.—Send to D. E. Hunter, Washington, and get certificates that will enable the holder to procure tickets at reduced rates on the following roads: O. & M.; L., N. A. & C.; J., M. & I.; C., I., St. L. & C.; L. & V.

L., E. & St. L., and E. & T. H., pay full fare going, and obtain certificate at the Association that will enable you to purchase return ticket at one cent per mile.

D. E. HUNTER, *Chm. Ex. Com.*,
February 24, 1883. Washington, Ind.

BACK TALK.

Editor School Journal:—In the last number of the School Journal you call attention to the fact "that *all* enjoy the benefits of the State Teachers' Association, and *a few* pay the expenses." A cursory examination of the list furnished by the Treasurer shows that *three* of those honored by the Association with a place upon its programme failed to pay their annual dues, as did also a former President of the Association, a candidate for President at the last meeting, two of the *present* Executive Committee, and one of the present Vice-Presidents. All of these, we believe, were at the meeting. If these high dignitaries were so forgetful, can you not make some allowance for the "common taters"? *

Editor School Journal:—On page 100 of the February number, you say that "The Teachers' Guide, of Cleveland, Ohio, has *'turned its heels to the daisies.'*" Is not that rather a peculiar way to bury an individual—with its face down?

"At last he's dead—and here he lies,
And now his soul at ease is,
With the end of his nose and the *tips of his toes*
Turned up to the roots of the daisies."

According to the writer's recollection, these lines gave origin to the expression "turned his *toes* to the daisies," and are somewhat more in accordance with burial customs. What say you? S.

PERSONAL.

B. B. Harrison is superintendent of the Waterloo schools.

A. W. Higgins is serving his third year as principal of the Veedsburg schools.

G W. Van Horn has been promoted to the principalship of the Connersville high school.

W. T. Fry's headquarters are at Indianapolis, not at Crawfordsville, as stated in last month's Journal.

J. L. Smith, formerly of Ladoga, is now one of the instructors of the school at Paradise Valley, Nevada.

W. W. White, formerly of this state, is giving good satisfaction as principal of the Raisin Valley Seminary, Mich.

Levy, Baker & Co. have removed their business establishment from Madison to Indianapolis. They office 143-5 South Meridian street.

H. C. Ingram, of the Paoli Academy, has resigned to take the principalship of the Paradise Valley, Nevada, schools, at \$100 per month.

Ziba F. Williams, Supt. of Martin county, who is in trouble over selling the state board questions, has appealed his case to the Supreme Court, and so is likely to remain in office till the end of his term, June next.

J. M. Gregory, for many years President of the Illinois Agricultural College at Champaign, and one of the leading educators of the country, has been appointed by President Arthur as one of the three Civil Service Reform Commissioners.

Thos. W. Harvey, author of Harvey's Grammars, has resigned the superintendency of the Painsville, Ohio, schools. Dr. Harvey is one of the ablest of Ohio's many able educators, and has been at the head of the Painsville schools for many years.

Pres E. E. White, of Purdue University, has been suffering much inconvenience as well as pain the past month from rheumatism in his right arm. During a portion of the time he was forced to employ an amanuensis, his earnest and vigorous spirit not allowing him to take the needed rest.

POPULAR SCIENCE.

This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

ZOOLOGY.

A venomous lizard from Mexico has been given to the Zoological Garden of London, by Sir John Lubbock. All of its teeth are con-

nected with poison-glands. This is the only four-legged animal known to have poison-fangs. It is called *Heloderma horridum*, or in English, "horrid warty-skin."

J. Schneck, of Mt. Carmel, Ill., captured a common garter-snake, July 26, 1882, containing ~~twenty-eight~~ young, from seven to five inches long. Most of them were well developed. They were in sacks, three to five in each. The same naturalist took eighty-seven young, each about six inches long, from a common spotted spreading adder which he had shot into.

The robin collects a large billful of worms before going to her nest. The smart English sparrow notices this and secures them while the robin is scratching in bare. This story is related by Elliot Cones, the most eminent ornithologist in America.

Now is the time to see the chickadee at his best. This bird is always with us, but most abundant in winter. Along any thicket or deep wood you will find them in sunny March days, "merrily singing their chick-a-dee-dee." It is a "defier of both frost and heat," and as Burroughs says, a "diligent searcher after truth in the shape of eggs and larvæ of insects." Emerson's poem, "The Titmouse," shows its points as both hero and philosopher, and is well worth reading. He describes its color: "Ashes and jet all hues outshine," and with Emerson's extravagance asks, "Why are not diamonds black and gray?" This is the only bird the Christians have in anything like natural colors. Of its size, (only five inches long), Emerson says:

"I think no virtue goes with size;
The reason of all cowardice
Is, that men are overgrown,
And, to be valiant, must come down
To the titmouse dimension."

The common insect powder is the crushed leaves and stems of *Brassicum roseum*, a pretty herb of the Himalayas. The seed may be had from the Department of Agriculture, Washington, D. C.

BOTANY.

A rose bush at Hildesheim, in Hanover, reputed a thousand years old, and planted by Charlemagne, is thirty feet in breadth, thirty-two feet high, and a prolific bloomer.

There are not less than ten thousand American flowering plants known, and probably two thousand undiscovered. The Harvard herbarium is over-run, and Dr. Gray solicits the aid of all botanists. Of these plants Indiana has fifteen hundred.

A common sized tendril of the Virginia creeper will support a six pounds. No wonder they "hang on" in all weathers on walls and trees so confidently. This is our true American

Ivy. It is handsomer than the English ivy. It is found in all Indiana woods, and might easily be made to beautify every church and home in the state. It is the chief adornment of several of the Indianapolis churches. Long live *Ampelopsis quinquefolia*—the Five-leaved Virginia Creeper. It need never be confounded with the Poison Ivy which has but three leaflets.

The so-called "annual rings" do not indicate the age of the tree. Dr. A. L. Child found thirty-five to forty separate rings in red maples only ten years old. Estimates of tree age based on the number of growth-rings can not be very accurate.

PERSONAL NOTES.

Professors D. S. Jordan and Charles Gilbert, of the State University, in a late number of the *University Student*, (the college paper), give a list of one hundred and sixty-five papers written by them within the last six years. They mainly relate to the fishes of North America, and comprise upwards of three thousand 8x10 printed pages. These papers have been published gratuitously by various states, and the national government. They represent a vast amount of labor, travel, and study, and are among the most important researches in natural history in the last ten years.

Prof. Charles Gilbert is at Panama collecting fishes, both salt and fresh water, under the direction of the U. S. Fish Commission. He returns in March.

Prof. John Collett's *Geology of Indiana for 1881* is highly spoken of by the *American Naturalist*, which says "the volume is of much educational value." Prof. James Hall, the veteran geologist of New York, devotes a column review to it, commending it highly. This review is published in the *Indianapolis Daily Journal* of Dec. 22d.

Prof. John M. Coulter, of Wabash College, has enlarged the *Botanical Gazette*, commencing with January, volume eighth. Its capacity is doubled, and it is as large and neatly printed as monthlies that cost two dollars instead of one, the price of this. Prof. Charles R. Barnes, of Purdue University, and J. C. Arthur, of Iowa, are associate editors. This is purely a technical and botanical journal, and no live teacher of analytical or physiological botany can afford to be without it. Its subscription list includes the principal botanists of America and Europe.

Miss L. J. Martin, of Indianapolis high school, gave a full course of forty lessons to a junior class in cryptogamic botany with marked success, although but two compound microscopes were available. No text-book was used. The work was mainly objective. Herbariums of forty to fifty species were collected by each pupil,—ferns, mosses, fungi, and the like.

MISCELLANEOUS.

There is no gulf stream in the Gulf of Mexico. The gulf stream does not run in a basin. It is two thousand seven hundred feet deep opposite Florida, and runs from five to eight miles an hour, and has a temperature from 80° to 83° Fabr. The cold water of the Arctic flows inside the gulf stream off the American coast, and also under it, falling to a depth of six thousand feet, and with a temperature of $36\frac{1}{2}^{\circ}$. The best food-fish are found in cold waters, and in this respect the Atlantic coast of North America is greatly favored.

The Atlantic coast is sinking. The encroachments of the sea at Long Branch and Sandy Hook are well known facts, as also the submerged forests of Long Island. New York and Brooklyn will doubtless maintain their position above the sea level through a long era.—*State Geologist, New Jersey.*

The French Academy of Science have awarded M. Pasteur a medal. M. Dumas said in presenting it: "The Academy is elated at your researches; France ranks you among her glories. Science, agriculture, industry, humanity, will feel eternal gratitude to you, and your name will live in their annals among the most illustrious and the most venerated." M. Pasteur rescued the silk industry of France from ruin, studying the parasite that destroyed the worms for ten years, and until his left side was paralyzed. He taught the French people how to preserve their wine from souring and to keep vinegar from losing its acidity; also, how to "vaccinate" against chicken cholera, and *anthrax*, a cattle disease which annually destroys thousands of domestic animals in France and Russia. He is one of the best known and most honored of Frenchmen, both at home and abroad. His honors are not those of French politics or European militarism, but his victories have been gained over microscopic fungi which require the highest power of the microscope to detect and study.

BUSINESS NOTICES.

If you wish to raise a club for the Journal, write for terms to agents.

We call attention to the Review and Normal Term in the Academy of Purdue University, commencing April 3d, and advertised in the last number of the School Journal. With such well-known and able teachers as President White and Profs. Thompson, Barnes, and Smith, none but the best work will be done. This takes the place of the *Purdue Summer Normal School*.

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(*Scientific American, New York, Dec. 16, 1882.*)

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12-6

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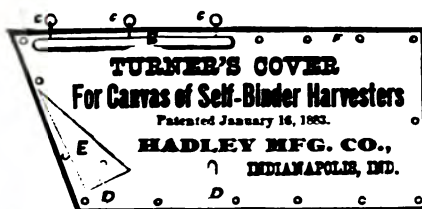
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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

APRIL, 1883.

No. 4.

READING FOR TEACHERS.

GEO. P. BROWN, PRES. STATE NORMAL SCHOOL. ✓

IN the discussion of this subject I shall keep constantly before me the information and training needed by the teacher as *teacher*, and not as an intelligent member of society. But it may be found that, in a very large measure, reading and study which best fits him to teach will best prepare him for social enjoyment and usefulness.

What line of reading and study a teacher shall pursue, must be determined ultimately by what his conception is of the purpose of teaching. If he have a correct and well defined idea of the purpose of the school, he can hardly go wrong in choosing a line of study that shall enable him to pursue a more rational method of realizing that purpose.

I assume that the ultimate purpose of school education is the training of the will. Matthew Arnold says that conduct is three-fourths of life. Schopenhauer declares the normal man to be two-thirds will and one-third intellect. Another says that *doing* is an essential organ of *knowing*. There is a saying commonly received as a maxim, than one must *learn* to do a thing by *doing* it. The resultant of the proper training of the will is character. Character is that spontaneous impulse of the mind to move along certain lines of intellectual and moral action when the conditions that impel to action are supplied. Character directs the conduct

without any conscious choice of the will between contending motives. It is the habit of the mind, a "second nature." But it may be the product of long-continued, persistent and conscientious training, each conscious act of will leaving behind a residual force which helps to direct any subsequent movement of the mind in the same channel, until this residual force has accumulated sufficient strength to direct the mind without any conscious act of volition.

The history of the word "character" is suggestive. Originally the word meant an instrument used to stamp an impression, as a seal; subsequently it was used to name the impression itself; and finally to signify fixed and reliable traits.

Let it be admitted that the training of the will—the formation of character—is the ultimate aim of the school; the next inquiry is as to the process.

A brief and general statement of the process is that the will is trained in school by leading it to direct the intellectual, moral, and physical activities in obedience to the direction of the teacher.

Train the child to obey is the fundamental rule for all education of the will. But obedience implies a subjection of the heart as well as of the will and the intellect. "The teacher's authority must have ascendancy over both heart and mind." Then is obedience implicit; and implicit obedience is the way by which the child must ascend to rational obedience. The child loves to obey when he who commands "has ascendancy over both heart and mind." "He obeys, and, at bottom, admires those who coerce him, if the means be wisely chosen." Happy is it for the child if, when he has ascended from implicit to rational obedience, he shall find that the habits, the character, he has been unconsciously forming are in harmony with the dictates of reason to which he must henceforth be obedient. Shame and everlasting confusion rest upon that teacher, who, having the authority, fails to exercise it to the present and future well-being of the child.

It is needful that we make a more specific statement of the process.

The child is to be led to direct and persistently to control his intellectual activities. This he does by the power of attention, which is here but another name for will. The responsibility of the teacher rests in leading the pupil to attend to the right things and in the right way.

While the commanding purpose of the school is the training of the will, there are many secondary purposes which must be realized. Prominent among these is valuable information. "What knowledge is of most worth?" must, each day, and a hundred times a day, be answered by the teacher. The law prescribes *what* subjects, but it is silent as to *how much* and *what part* of each shall be taught. This must be determined by the teacher in most cases.

Of not less importance is the proper exercise and training of the several intellectual faculties employed in the acquisition of knowledge. "Learning is more useful than knowing. It is the way and not the goal, the work and not the product, the acquiring and not the acquisition, that educates will and character." It is the doing, and not the thing done, that educates every faculty of the mind. But the method of doing must conform to the nature of the mind, and the thing done must be adapted to the stage of the mind's unfolding, if any proper education is to result.

Still another purpose is the realizing in the school of that type or method of instruction which shall best form the mind for future independent activity. This is a purpose hardly inferior to that of training the will to cheerful and ready obedience to the requirements of truth and goodness.

But the way by which this end is to be sought is not yet definitely determined. Our knowledge of it is yet in the stage of opinion. Every person born into the world has a birthright to the possession of an exceedingly rich inheritance. All of value that has been thought or discovered by the race is his, if he can but take it. It is garnered in books which are so cheap that even poverty is no bar to their possession. All of the past is there. Each one, through books, can learn the history of himself as he has come down through the ages. He is what he is,

the right heart to the lungs and back to the left heart, is to purify the blood by the removal of carbon di-oxide with other injurious matter, and the substitution of oxygen. The object of systemic circulation, from the left heart throughout the system back to the right heart, is the carrying of nutriment (liquid and gaseous), to the various tissues of the body, the removal of waste material, etc. The portal is a secondary circulation of the blood from the veins of the stomach, pancreas, intestines, and spleen to and through the liver, thence to the ascending *vena cava*, by means of several venous plexuses. Its object is to furnish materials from which the liver may secrete *bile* for use in digestion, and *glycogen* as a reserve store of materials for the performance of work by the body. The latter is the chief function of the liver. The mesenteric circulation, like the others mentioned, is not a full circulation, and consists in the passage of the lesser portion of the nutrient material, together with some lymph, from the walls of the intestines to the thoracic duct. Through the delicate walls of the capillaries there is an exosmosis of liquid from the blood, forming a plasma in which a large number of the cells of the body are bathed and by which they are nourished. This liquid is called *lymph*. It floats in the cavities and little canals between the cell-walls until, worn out and charged with waste materials, it enters regular channels and is emptied, directly or indirectly, into the right or left subclavian vein, on its road to the heart. This is the general lymphatic circulation.

7. By seeing that the sick room itself has proper ventilation, by a sufficient amount of exercise judiciously taken in the open air, by taking due rest in sleep, by taking double the usual number of baths and changes of underclothing so as to keep the skin in good condition, and by avoiding direct inhalations of the sick person's breath, a regular watcher can usually attend in the chamber of a sick person "with comparative safety."

8. Flowers in the school-room give it a more homelike and cheerful appearance, break up much of the monotony of the pupil's surroundings, lead it to observations of nature and to thoughts of the beautiful, and, in the light, decompose the carbonic acid thrown off from the lungs and liberate the oxygen into the atmosphere. In the night, however, or when much shaded, they are said to cease decomposing carbon di-oxide and to give off this substance. In addition, many teachers will neglect to give proper ventilation for fear of injuring their plants. Whether the growth of plants in the school-room is, on the whole, beneficial, admits of question.

9. The teacher should labor under no difficulty in determining whether the air of the school-room is pure or not. If he step out of the room into fresh air, one sniff will satisfy him on his return. As a general thing, if the pupils begin to show unusual drowsiness or

listlessness, or to be unusually restless or flushed in the face, the air of the recitation-room is evidently injurious *from some cause*.

10. Alcohol at first increases the rapidity of the circulation, but when its immediate effects are gone, a reflex action takes place, during which the system loses tone.

READING.—3. All correct reading is an accurate expression, by words, tones, inflections, and emphasis, of the thoughts of the written or printed page. No one can correctly convey these thoughts to another, who has not made sufficient study of the words, both as to their general and as to their local meaning, to thoroughly comprehend their force. The relation of a thought to preceding and to succeeding thoughts must also be known. Hence much attention should be given to the meanings of words in the preparation for a recitation in Reading.

4. There are various ways of teaching the meanings of words. The "definition way," by itself, is considered by the writer a very poor way, though it is better than none. The practical application of words is clearly not learned from the dictionary, but the dictionary from their practical application. Definitions learned by rote are isolated, disassociated. A person may be a good judge of diamonds and a judge of good diamonds without being able to pick just the diamond needed for a certain setting.

It is suggested that a good way to teach the meaning of words, either orally or by writing, is to have the pupil give, (1) the word; (2) a sentence containing the word; (3) the definition of the word *as used in the sentence*. If this method be used with written lessons, in the one lesson may be taught spelling, the use of the diacritical marks, the use of the accents, composition (including both invention and expression), and accurate definitions.

HISTORY.—1. Biography is the record of the life of an individual. History, as defined by Thomas Arnold, is the biography of a political society or commonwealth.

2. Columbus discovered the mainland in 1498, near the mouth of the Orinoco, in South America.

3. The first Spanish settlement was at St. Augustine, Florida, in 1565. The first Dutch settlement was at New Amsterdam, now New York City, in 1614.

4. The Provincial, the Proprietary, and Charter Governments.

5. *a.* Brandywine and Saratoga. *b.* Battles of Camden and King's Mountain.

6. James Madison, Alexander Hamilton, and John Jay.

7. John C. Calhoun.

8. John Adams, John Quincy Adams, Martin Van Buren, James K. Polk, Franklin Pierce, James Buchanan, Rutherford B. Hayes.

9. Gens. McClelland, Burnside, Hooker, Meade.

10. Washington Irving, Jared Sparks, J. T. Headley.

MISCELLANY.

PORTLAND.—The schools show a total enrollment of 562, and are doing well. Morgan Caraway is superintendent.

A joint meeting of the teachers of Williams and Defiance counties, Ohio, and De Kalb and Steuben counties, Ind., was held at Butler, Ind., Feb. 16th and 17th.

HAMILTON COUNTY.—The school board in this county is well organized, and the schools are well organized. The examination questions for pupils, sent out by Supt. A. H. Morris, indicate a good standard.

FRANKLIN.—A gentleman who recently visited the Franklin schools makes a favorable report. He says the schools are not equally good, some being very much better than others. One recitation is reported, "the best I ever heard in my life."

TERRE HAUTE.—The Report of the Terre Haute schools for 1881-2 is one of the most tastefully arranged and printed manuals we have yet seen. It is full, and shows the schools in excellent working order. Supt. W. H. Wiley is at the helm, and keeps the school ship in the current of progress.

The annual meeting of the Department of Superintendency of the National Educational Association met in Washington, D. C., Feb. 20th. The programme (incomplete) of the meeting was not received at Indianapolis till Feb. 14th, making the notice entirely too short. N. A. Calkins, of New York City, was president.

CAMBRIDGE CITY.—A new variety of public entertainment was recently inaugurated by the public schools of Cambridge City, in the shape of a Reading Contest. Readings were given from the Third Grade up, and prizes were awarded. This is certainly a good method of stimulating pupils to greater efforts in this direction, and to interest parents.

DELAWARE COUNTY.—The board of education of Delaware county seems to be one of the most active in the state. At a meeting held February 19th, they discussed fully the law under which the enumeration is taken, had reports from committees on various subjects, organized a plan for a general canvass for the flood sufferers, etc., etc., and telegraphed for State Supt. Bloss to address them and the teachers and citizens, Saturday, Feb. 24th. He accepted the invitation. Supt. Clancey is the director.

NEWTON COUNTY.—The Newton county teachers' association, held at Kentland, February 16th and 17th, was a success in spite of the

stormy weather and high waters. • Supt. B. F. Johnson, of Benton county, was with us on both days, and assisted very materially in the work. He read a very able paper on the "Objects and Methods of Government." Our teachers showed their appreciation of his work by a vote of thanks. Many other visitors were present, among whom was J. W. Caldwell, of Sheldon, Ill.

A committee of three, viz, N. F. Jenkins, J. J. Eckman, and Wm. M. Sinclair, was appointed to meet the teachers of Northwestern Indiana at Monticello (time to be determined), for the purpose of perfecting a permanent organization of a Northwestern Indiana Teachers' Association. March 9th is suggested for preliminary meeting. Let the good work begun go on. W. H. H.

SOUTHERN INDIANA TEACHERS' ASSOCIATION.

Washington, Ind., April 4, 5, 6, 1883.

WEDNESDAY, April 4—Afternoon. 1. Visit schools. 2. Arrange Exposition work. *Evening*—1. Address of welcome, by Mayor Arthur Beddoe. 2. Response, J. R. Trisler, Lawrenceburgh. 3. Inaugural of President, H. B. Hill, Aurora. 4. Business. 5. Social.

THURSDAY, April 5.—1. "Some Cyphering at the Country School Problem," J. C. Macpherson, Supt. Wayne Co. Discussion opened by H. A. Yeager, Supt. Gibson Co. 2. The Coming Superintendent, J. S. Hall, Supt. Crawford Co. Discussion opened by J. R. Hart, Supt. Switzerland Co., and A. P. Carr, Supt. Clark Co. *Afternoon.* 1. Appointment of Nominating Committee, and fixing time and place of next meeting. 2. Culture, and the Influences which Cause its Growth, D. S. Kelley, Supt. Jeffersonville. Discussion opened by W. E. Lugenbeel, Pres. Southern Ind. Nor. College. 3. Schools of New Harmony in "Community Times," Col. Richard Owen, New Harmony. 4. Principles that prevail in Methods of U. S. History, Prof. Howard Sandison, State Normal School. A Lesson with Pupils Illustrative of these Principles, Prof. A. L. Wyeth, Prin. of Training School, State Normal. *Evening*—1. The Limestone of Indiana, Prof. John L. Campbell, Wabash College. 2. "Antietam," Prof. John M. Bloss, Indianapolis.

FRIDAY.—1. Business. 2. Language Lesson with Class, Miss Ophelia H. Roddick, Washington. 3. The Work of the Primary Teacher, Miss Kate Huron, Danville Normal. Discussion opened by H. B. Jacobs, New Albany, and A. J. Snoke, Princeton. 4. Sauveur's Method, Miss Ella Munson, Mitchell. Discussion opened by J. A. Marlow, Supt. Sullivan Co. 5. What must be Done with the Growing Hoodlum Element, James G. May, Salem. Discussion. *Afternoon*—1. Experiments in Natural Philosophy, Prof. C. E. McVay,

Cincinnati, O. 2. Supplementary Lesson in U. S. History, Prof. A. L. Wyeth, State Normal. Discussion of Prof. Sandison's paper and Prof. Wyeth's Lesson, opened by C. F. Coffin, Supt. New Albany. 3. Reports of Committees. *Evening*—1. Address, E. E. White, Pres. Purdue University. 2. Social.

SATURDAY.—1. Visit Coal Mine and Indian Mounds.

Exposition of School Work.—Teachers are requested to bring such of their school work as can be conveniently placed on exhibition, and space will be assigned for it. Every one can contribute one paper or more to this new and valuable feature of the association.

Hotels.—The principal hotels will make reductions to those who present certificates of membership, Hyatt Hotel, \$1.50 per day; Meredith House, \$1.00 per day.

Railroads.—Send to D. E. Hunter, Washington, and get certificates that will enable the holder to procure tickets at reduced rates on the following roads: O. & M.; L., N. A. & C.; J., M. & I.; C., I., St. L. & C.; I. & V.

L., E. & St. L., and E. & T. H., pay full fare going, and obtain certificate at the Association that will enable you to purchase return ticket at one cent per mile.

D. E. HUNTER, *Chm. Ex. Com.*,
February 24, 1883. Washington, Ind.

BACK TALK.

Editor School Journal:—In the last number of the School Journal you call attention to the fact "that *all* enjoy the benefits of the State Teachers' Association, and *a few* pay the expenses." A cursory examination of the list furnished by the Treasurer shows that *three* of those honored by the Association with a place upon its programme failed to pay their annual dues, as did also a former President of the Association, a candidate for President at the last meeting, two of the *present* Executive Committee, and one of the present Vice-Presidents. All of these, we believe, were at the meeting. If these high dignitaries were so forgetful, can you not make some allowance for the "common taters"? *

Editor School Journal:—On page 100 of the February number, you say that "The Teachers' Guide, of Cleveland, Ohio, has '*turned its heels to the daisies.*'" Is not that rather a peculiar way to bury an individual—with its face down?

"At last he's dead—and here he lies,
And now his soul at ease is,
With the end of his nose and the *tips of his toes*
Turned up to the roots of the daisies."

According to the writer's recollection, these lines gave origin to the expression "turned his *toes* to the daisies," and are somewhat more in accordance with burial customs. What say you? S.

PERSONAL.

B. B. Harrison is superintendent of the Waterloo schools.

A. W. Higgins is serving his third year as principal of the Veedsburg schools.

G. W. Van Horn has been promoted to the principalship of the Connersville high school.

W. T. Fry's headquarters are at Indianapolis, not at Crawfordsville, as stated in last month's Journal.

J. L. Smith, formerly of Ladoga, is now one of the instructors of the school at Paradise Valley, Nevada.

W. W. White, formerly of this state, is giving good satisfaction as principal of the Raisin Valley Seminary, Mich.

Levy, Baker & Co. have removed their business establishment from Madison to Indianapolis. Their office 143-5 South Meridian street.

H. C. Ingram, of the Paoli Academy, has resigned to take the principalship of the Paradise Valley, Nevada, schools, at \$100 per month.

Ziba F. Williams, Supt. of Martin county, who is in trouble over selling the state board questions, has appealed his case to the Supreme Court, and so is likely to remain in office till the end of his term, June next.

J. M. Gregory, for many years President of the Illinois Agricultural College at Champaign, and one of the leading educators of the country, has been appointed by President Arthur as one of the three Civil Service Reform Commissioners.

Thos. W. Harvey, author of Harvey's Grammars, has resigned the superintendency of the Painsville, Ohio, schools. Dr. Harvey is one of the ablest of Ohio's many able educators, and has been at the head of the Painsville schools for many years.

Pres E. E. White, of Purdue University, has been suffering much inconvenience as well as pain the past month from rheumatism in his right arm. During a portion of the time he was forced to employ an amanuensis, his earnest and vigorous spirit not allowing him to take the needed rest.

POPULAR SCIENCE.

This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

ZOOLOGY.

A venomous lizard from Mexico has been given to the Zoological Garden of London, by Sir John Lubbock. All of its teeth are con-

The Desk.—Every pupil should be made responsible for the condition of his desk and the floor near where he sits. If pupils tear up paper and put it in their desks, or throw it on the floor, require them to remove it. If more than the average amount of mud is found under their desk, require them to sweep it out. Show them how, and then require their desks to be kept in order. If they purposely or carelessly soil their desk with ink, or bedaub it with grease, or anything else, let them know that they are expected to clean it. Prompt action on the part of the teacher will prevent wantonness in marking the desks with pencil, knife, or other instruments.

Keeping the Books Clean.—Books should be used but not abused. Every new book that is purchased by the pupils should be substantially covered. The teacher ought to show the pupils how to cover their own books. The teacher may write the pupil's name in a blank leaf, with date and residence, and then forbid any other writing therein. The blank leaves of school books are not autograph albums, for Sarah Ann, Susan Jane, or James Henry to write loving verses of *friendship* in, and the pupils should so learn. Do not permit them to write all through their books or draw caricatures, etc., in them. When such things are found have them erased. Tell the children that you shall look for it, and what will be the consequence if anything of the kind is found in their books.

There is still another habit that should be broken up in school, that of "spitting on slates," and rubbing it in with the hand. Excessive expectoration is hurtful to good digestion. And the habit of removing the work from the slate this way is too filthy to be fully considered by one with a weak stomach. It is nauseating. If the pupils can not procure slate sponges, then get cloths, and keep them wet with water for the purpose.

Keeping the House Clean.—In country schools where the teacher is often his own janitor, the house is under his care. It is then his business to see that it is regularly and carefully swept and dusted. The walls should be whitewashed each year, the windows cleaned, the casing should be scoured, and the floor stately scrubbed and mopped. The stove will need polishing

as often as once a month. Where pupils bring their dinners to school, they should be cautioned about throwing pieces of meat, crusts of bread, egg-shells, bones, and other things on the floor. Neither should they make a pool of water on the floor by the water-pail. No pencil marks on the walls, furniture, maps, charts, or on the stove, should be allowed. Ugly scrawls on the black-board walls are not permissible.

On the Premises.—There should be walks made to the out-houses, to the gates, the play-ground, and to the wood-pile. All unnecessary boards, sticks, weeds, and other trash should be removed from the grounds, and the premises be kept clean by the pupils.

Such training is most excellent discipline for growing hearts and minds. The influence is soon felt at home. A juster appreciation of the subject is felt by parents, and front yards are put in better shape, houses are kept tidier, and pupils soon come to school looking neater and sweeter, happier and healthier for this elevating influence of CLEANLINESS.

HERBERT SPENCER'S THEORY OF EDUCATION.

BY E. R. SILL.

PROBABLY nine-tenths of the popular sophistries on the subject of education would be cleared away by clarifying the conception of this word Nature. We hear the "natural method" eulogized, and the "natural man" is appealed to from morbid and unnatural conditions of living. But what is the natural method? It is of little value as an arbiter, unless it means that method which the sanest sense and the ripest experience of man has approved. And who is the natural man? Plainly, not the savage, not the undeveloped brute, but the man as he was meant by Nature to be: completely equipped in mind as well as in body; equipped, moreover, with the highest social and political arrangements, including a wise system of education. That is in the truest sense, the only rational sense for the purposes of such a discussion, the natural method, the natural

order of studies, the natural course of exercises, which the foremost Högskolan—which the lowest Fijian—would approve and adopt.

There is space to notice but one or two instances in which the false conception of Nature leads to error in this treatise; and first, in the objection to abstract studies. Mr. Spencer asserts that the natural activities of the mind in early youth are concrete, and that the whole education of this period should be concrete. Certainly, that is the method of wild nature, and wild nature never gets beyond that point. The uneducated man remains always in this respect, a child, incapable of abstract thought. What we wish to do is to develop out of this crude, unnatural Nature the truly natural man,—the man as Nature meant him to be, with the power and the habit of abstract conception and reasoning. Though we follow the order, we need not follow the pace, of wild nature. The sooner the boy can be brought to read intellectual books, and to grasp complex subjects easily and quietly, without strain or precocity or hindrance to the physical development, the more of a man will he make.

So, again, Mr. Spencer's words are often quoted in support of the attractive doctrine that education shall give boys to do only what they choose to do. Their diet, according to this theory, would be plum-cake and jam, and their reading would likewise be whatever was spiciest to the mental palate and easiest of mastication. Every parent and teacher knows something of what evils would follow this system, from his observation of the effects of the dime novel and of our juvenile literature in general. A young person had much better read Shakespeare and Mr. Spencer. Every teacher, at least, knows also how this theory has run into an absurd extreme in "oral teaching" and the "object-lesson." A boy does not need to be fed forever with a spoon. The time comes when he must learn to get his knowledge in the way that every educated man must always get it,—from the written page, and from self-controlled, persistent, laborious thought.—*February Atlantic.*

THE TOOLS OF THOUGHT.

WM. T. HARRIS.

THE five elementary branches are of infinitely more importance in a course of education than any other can possibly be—for this reason: The pupil who is taught how to master these subjects, is at the same time taught to master all branches of human learning—and this is just the work in which every one of the three hundred thousand teachers in the United States is engaged.

This mastery of the mind gives us also the mastery over the realms of nature as well, and makes possible all communication between man and man.

These tools of thought are :

- I. Reading.
- II. Arithmetic.
- III. Geography.
- IV. Grammar.
- V. History.

By the first of these the pupil issues forth from the circumscribed life of the senses in which he is confined, and finds himself in the community of the world at large, so far as his language extends. He is not limited by space; for the printed page of the text-book and the newspaper gives him a survey of the life of the globe. He is not limited by time; for the libraries open their doors and he associates with, and listens to, Socrates and Plato, Confucius and Zoroaster, and no empty gossip escapes from their lips! Faint echoes come down to him from the Chaldean oracles, and the Phœnician or Cushite civilization—most ancient of all. Not merely this: he can write his own thought, and thus be present to others far separated by time and space. This branch is the alphabet of all others, and leads to them.

By the second of these studies he becomes measurer of numerical quantity, and masters the practical side of exchange. The exchange of thoughts and ideas through reading and writing, is extended by arithmetic to a practical ability to exchange food, clothing, and shelter.

By the third he comes to realize his special relation to the rest of the world. He contributes to the world and receives from it, through commerce. The world through this relation is all a part of the patrimony of each individual. His farm, trade or profession furnishes him certain things through the medium of certain activities: so likewise does the whole world.

Every civilized man is interested in the cotton crop of Texas, the wheat crop of Minnesota, or the iron crop of Missouri, or the manufactures of England and Massachusetts, just as really, though not so vividly, as the farmer of Texas, the miner of Missouri, the manufacturer of Manchester or Lowell. Thus geography is one of the indispensable branches of education.

Grammar gives to the pupil the first consciousness of the mind itself as instrument. The formation of language exhibits the stages by which pure intellect becomes master of itself. The gradual analysis and superior grasp of thought which grammar gives, is compared with mathematics and physical sciences, for example, has long been noticed by educators. It is emphatically a culture study. It marks the educated man from the illiterate; the former uses language with conscious skill, the latter without it.

History initiates the learner into his past existence, in the same sense as geography into his outside (and out of sight) existence. For the precedent conditions of the individual belong to and are a part of his actual existence.

"Man! know thyself!" By self-knowledge the individual flows forth out of his immediate sensations (within whose narrow sphere he is as a brute, knowing neither good nor evil; for these are relations) and traces out his existence through the regions of space which it involves, and the æons of time which are its conditions.

He finds that his existence is no private, isolated affair, but a vast system—a process which has become through time, and is becoming, a process embracing "all nations and all climes."

What now, can be more practical than this?

Is, then, what our teachers are doing. Can you over-estimate the importance of this work?

Drop it out, and the pall of night, the darkness of ignorance settles down over all of us.

Curtail it, and you limit both the power and usefulness, as well as the life of every citizen.—*Am. Journal.*

UTILITY.

J. W. NICHOLS, WINCHESTER.

THE period of childhood is naturally one of inquiry. The youthful mind follows every action of its superiors with the question, "What for?" It delights in the explanation of causes. These questions do not always merit a reply, but they teach us the nature of children's necessities. The *why* of school work is sadly neglected. Teachers store the minds of their pupils with knowledge, without giving them an idea of the purpose, or use of such knowledge. Some receive it patiently and carelessly, as they would receive the tools of all the manual arts, with no knowledge of their use. Others take little interest in their lessons, and refuse to study some of the branches. They have never been shown the practical utility of these studies. The teacher may overrule their objection, but he will accomplish little good against the pupil's judgment. If a boy fails to see wherein a study will be of use to him in actual life, the great stimulus, thirst, is wanting.

The teacher must do a great deal of reasoning and explaining; the judgment, as well as the understanding, must be enlightened. He must answer such questions as the following: "What is the use of Longitude and Time? What is the use of learning the elementary sounds? What is the use of parsing?" Not only should he answer such questions that are asked, but he should anticipate, and answer, a thousand similar ones. Every new principle should have its use and relative value shown. The pupils should feel and know that everything learned at school is filling them with capabilities for higher usefulness and enjoyment.

This idea of utility, and fitness of things, should be set forth in school-management. Teachers are often too autocratic in their discipline; and thereby defeat every possibility of self-government on the part of the pupil. There are sound, common-sense reasons for the observance of all the rules necessary to a good school; and the teacher who sees that these are understood by his pupils, will have little trouble from disobedience. Many a bad boy has been wholly reformed by a few words of skillful reasoning. He had never before thought of the real, practical advantage of good conduct.

Let the teacher keep before his school the utility and blessings of education and a life of upright conduct, and he has logic that none can withstand.

CHEESE VS. CHILDREN.—The superintendent of a great and ambitious state laments the weakness of the district school and recommends consolidation, and in complimentary terms infers that, as the people have accepted professional cheese and butter makers, they will soon be wise enough to call into their rural schools none but professional educators. It is evident in this case that cheese has the start of the children.

The statement openly and emphatically made, that the old time district school was better than its successor of to-day, is not so wild as it sounds. In many cases, the school of years ago, with its large number, its spelling matches, its debating society, the intellectual center of a neighborhood, has dwindled to a state of feebleness unpleasant to contemplate. The well-to-do boys and girls seek the town school, leaving the home school to the very young and the poorer children, to be presided over by a youthful member of the large Micawber family.

Young men of force and ambition now make the district a stepping-stone to a broader and more exacting life. They find better support in their struggle to rise in other directions. It is doubtful whether it will be said of the Garfields of the next generation that on their way upward they honored and pressed the common school as instructors.—*Min. Ed. Jour.*

THE ELEMENTS OF GOVERNING POWER.

BY E. E. SMITH.

THE VINE AND ITS BRANCHES. ✓

IN the previous article we spoke of the striking resemblance between the relations of the vine to its branches and of the teacher to his pupils. We shall also find a marked similarity between these—the vine and the teacher—in their sources of strength and influence.

1. *Good Soil—Thorough Education.*—The stronger the soil, the more vigorous the growth. The profession of teaching is progressing. The acquirements of the teacher should progress also. The wages are not increased proportionally, it is true. The teacher is not to be governed by the law of wages, but by the law of responsibility and usefulness. He should get the most liberal education that his circumstances will allow—not only special but general. The teacher, of all persons, can least afford to travel in a rut, especially a single tracked one. The rut will become a gully whose sides are so steep and high that they both shut out sunshine and throw shadows.

Good scholarship gives resources from which to draw in emergencies, affords abundant means of illustration, forearms for those difficulties which are constantly springing up on account of the relation which each branch taught bears to general education,—in short, enables the teacher to feel himself master of the situation.

But the teacher's knowledge must have a growth as well as the pupil's. Otherwise, like a fund in bank, continual drafts will soon exhaust it; or, like an oft-told tale, it becomes stale and unprofitable. As Dr. Arnold once said to an inquiring friend, "I prefer that my pupils should drink from a running stream rather than a stagnant pool,"—so the teacher should be fresh—full of the subject-matter—alive to all its minor details as well as to its general relations, so that he may know the objects of each day's work and when they have been accomplished. He thus makes the recitation livelier, feels freer himself, is not

hampered by the text-book, makes no wild, scattering, and misleading remarks, and works directly to a definite impression upon the pupil's mind.

A thorough education in the line of the profession has another advantage. It reveals obstacles in the road of progress that otherwise might be run against to the harm both of the teacher and of the school. It affords inspiration amid difficulties by the knowledge that others have borne the heat and burden of the day, *and conquered*. It lifts us into a higher plane of thought, and it relieves from much of that worry—*worry*—WORRY, that is grinding the life out of so many faithful but overly-anxious teachers. Ah, my good yoke-fellows, we must not expect to see the living germ burst from its seed-walls in the darkness of the ground, or to be able to measure its daily growth! We must leave some things to the great Master of the Harvest.

The writer will never forget one day in his teaching life some fifteen years ago. He had thrown the best energies and the best thoughts and the best words of which he was capable into the year's work, but after the class of young men filed out of his room at the close of the last exercise of the day, he leaned his head upon the desk, sad-hearted and thoroughly discouraged. The session was drawing to a close, and he seemed to have accomplished very little for and in those who were under his instruction and guidance. It was an afternoon in spring, and he took his hat and walked mechanically towards the suburbs of the city. The grass was giving the earth a coating of green, the leaves were coming out upon the trees, and some vines by the wayside were putting forth tendrils for climbing upward. Suddenly the thought came as if by inspiration, "You never saw the grass, or the leaves, or the vines, grow; it is only by patient waiting that you can finally look back and see that they have grown. So with the human mind; you can not see its development, its unfolding. It is only by faithful labor and by patient waiting that you will after awhile be enabled to see that it has expanded." From this he took fresh courage and went into the school-room the next morning feeling much happier than when he left it the day before.

The knowledge of other books, other objects, other lives of thought, enables the teacher to turn away from the consideration of the routine work of the school-room to, for the time, more pleasing things. The different faculties of the mind, like the different muscles of the body, may labor and rest in turn. A good hobby even, if it is not ridden over the shoulders of the pupils, may be a relief, especially if it lead to study and reading in other fields of thought than those daily searched in the school-room. All these things afford recreation and prevent a too rapid wearing out of the vital energies.

But, says one, "I do not see how I am to find time for these things, and also for daily preparation to secure order, system, and good recitations." The writer's experience is, that what the teacher lacks more than time is the knowledge of how to use his time to the best advantage. A lawyer in Cincinnati astonished his associates at the bar by the large and varied fund of information on subjects outside of the professional line which he possessed and used. In answer to an inquiry, he stated that he acquired this knowledge by *twenty-minute* studies and readings before breakfast each morning for eleven years. When anything seemed to him specially interesting or valuable, he gave it a 20-minute review the next morning. Twenty minutes each day is two hours per week, one hundred and four hours per year. But, says another, "One can not read so very much in that time." My friend, it is not the amount you read, but the amount you digest, that is of value to you.

But how does the securing of knowledge help in the government of a school? In the proper acquisition of knowledge the mind is necessarily disciplined and its operations systematized. This tendency to orderly procedure ultimately develops into a habit of doing things at the right time and of keeping things in the right place. It may also result in the habit of fitting one's thoughts to the occasion and thus prevent the utterance of words that may wound, alienate, or antagonize.

2. *Sap—Spirit of Work.*—What sort of spirit shall the teacher carry into his work? The young, impressionable, and plastic souls that come under his influence are but as clay in the hands

of the potter. Shall he be cold, formal, and dogmatic? Can you melt human nature by laying it up against an iceberg? The breath that comes from the Arctic regions is the breath of death, not of life. Its spirit is the spirit of stark, stiff, rigid uncomeliness, and the character developed by it is a stark, stiff, uncomely character.

It takes sunshine, and warmth, and balmy breezes to unfold buds. And just so the teacher must have a large amount of heart-power, must be gentle and generous, sympathetic and cordial. He should know the home life and surroundings of his pupils that he may make proper allowance for their weaknesses and errors. A word, a grasp of the hand, a kindly glance, will often touch a tender chord in the child's heart, and help to heal some sore wound made by a rougher hand, and awaken it to increased and better effort, out of gratitude for the good it has received.

The right spirit of work grows out of devotion to the pupils and love of them because they are human beings whose heritage is immortality. Woe be to that teacher through whose neglect or misguidance this birthright is traded for a mess of pottage! It matters not whether the child come to the doors of the school house "clothed in purple and fine linen," or whether he come in patches and dirt. If he come in such miserable plight that even the dogs would fain "lick his sores," so much the more reason that a helping hand should be extended, a better way be shown, and a promise of brighter days and happier surroundings be given.

Two sea captains, in the employ of rival merchants, were on their way from China to New York, the ship of each carrying a large cargo of tea. The market at that time was not sufficiently brisk to furnish a good profit to both merchants, and hence the one who got into port first and unloaded, would reap a handsome reward. All sail was set upon both ships, which had been in sight of each other for several days, when suddenly the boom of a gun from one of them indicated that distress of some kind had overtaken it. The other captain kept on his way. The first ship rounded to, another boom sounded over the waters, and a

signal went up to the mast-head. The other captain kept on his way. It would put him to considerable inconvenience to stop, there was money to be gained by getting ahead, it was the other ship's business to look out for itself. A fine breeze had sprung up that was taking him along nicely. But a glance back revealed huge volumes of smoke and bright flames coming from the ship in distress. Our captain now ordered his ship put about and went back to the help of the burning vessel. But he was too late. Relying upon his help, the crew had not thought of their boats, but had expended their energies in endeavoring to extinguish the fire, and now they were in the midst of the devouring flames. Their agonizing cries for help were plainly heard by the stony-hearted captain, not only then, but in all after life. Wherever he was, sleeping or waking, that terrible vision and those despairing cries were ever present with him.

Fellow-teacher, the homes of pride, selfishness and indulgence, and those of vice, drunkenness and misrule, are the burning ships from which the cries of the helpless come to your ears. Here is a bright boy. There is promise in his open, manly face. His father is wholly absorbed in business. His mother "has a mission," or is devoted to the pleasures and frivolities of a fashionable life. Here is another boy, poorly dressed, not altogether cleanly. But his eye is clear, his step is firm, his mind is quick, his heart is not altogether hardened. His mother is a sloven, and possibly worse. His father is frequently drunk and generally quarrelsome and abusive. *The homes of these two boys are on fire.* Will you leave them till the flames of selfishness and sensuality on the one hand, or of debauchery and crime on the other hand, have burned out all that is good and beautiful and true from their hearts? If so, are you guiltless? Does not the true spirit of work require a conscious discharge of all duties assumed?

The true teacher must be filled with love for his work and with an earnest zeal for doing good. He must make the child feel that he is its friend, must establish a frank, generous confidence in his good will, must lead it gradually to a recognition of its own defects and opportunities for improvement, must awaken its curi-

order of studies, the natural course of exercises, which the foremost Englishman—not which the lowest Fijian—would approve and adopt.

There is space to notice but one or two instances in which the false conception of Nature leads to error in this treatise; and first in the objection to abstract studies. Mr. Spencer asserts that since the natural activities of the mind in early youth are concrete, therefore the whole education of this period should be concrete. Certainly, that is the method of wild nature, and wild nature never gets beyond that point. The uneducated man remains always, in this respect, a child, incapable of abstract thought. What we wish to do is to develop out of this crude, unnatural Nature the truly natural man,—the man as Nature meant him to be, with the power and the habit of abstract conception and reasoning. Though we follow the order, we need not follow the pace, of wild nature. The sooner the boy can be brought to read intellectual books, and to grasp complex subjects, easily and quietly, without strain or precocity or hindrance to the physical development, the more of a man will he make.

So, again, Mr. Spencer's words are often quoted in support of the attractive doctrine that education shall give boys to do only that which they choose to do. Their diet, according to this theory, would be plum-cake and jam, and their reading would likewise be whatever was spiciest to the mental palate and easiest of mastication. Every parent and teacher knows something of what evils would follow this system, from his observation of the effects of the dime novel and of our juvenile literature in general. A young person had much better read Shakespeare and Mr. Spencer. Every teacher, at least, knows also how this theory has run into an absurd extreme in "oral teaching" and the "object-lesson." A boy does not need to be fed forever with a spoon. The time comes when he must learn to get his knowledge in the way that every educated man must always get it,—from the written page, and from self-controlled, persistent, laborious thought.—*February Atlantic.*

THE TOOLS OF THOUGHT.

WM. T. HARRIS.

THE five elementary branches are of infinitely more importance in a course of education than any other can possibly be—for this reason: The pupil who is taught how to master these subjects, is at the same time taught to master all branches of human learning—and this is just the work in which every one of the three hundred thousand teachers in the United States is engaged.

This mastery of the mind gives us also the mastery over the realms of nature as well, and makes possible all communication between man and man.

These tools of thought are:

- I. Reading.
- II. Arithmetic.
- III. Geography.
- IV. Grammar.
- V. History.

By the first of these the pupil issues forth from the circumscribed life of the senses in which he is confined, and finds himself in the community of the world at large, so far as his language extends. He is not limited by space; for the printed page of the text-book and the newspaper gives him a survey of the life of the globe. He is not limited by time; for the libraries open their doors and he associates with, and listens to, Socrates and Plato, Confucius and Zoroaster, and no empty gossip escapes from their lips! Faint echoes come down to him from the Chaldean oracles, and the Phoenician or Cushite civilization—most ancient of all. Not merely this: he can write his own thought, and thus be present to others far separated by time and space. This branch is the alphabet of all others, and leads to them.

By the second of these studies he becomes measurer of numerical quantity, and masters the practical side of exchange. The exchange of thoughts and ideas through reading and writing, is extended by arithmetic to a practical ability to exchange food, clothing, and shelter.

because of what has been. To know himself he must know this history.

It is also true that every person inherits immense possibilities. There is an infinity of knowledge yet to be quarried, of which the race is ignorant. What has been discovered is only an infinitesimal part of what is waiting for a discoverer.

Now the school is a preparation for life. Shall the type of its method be that which trains the mind to take possession of that inheritance into which it is born, or shall its purpose be to train the mind to the making of new discoveries? Shall the method of the school be the Method of Discovery, or the Method of Instruction? Shall its immediate aim be to train the child to master the printed page, or to master nature? If the former, then text-books are of use; if the latter, these books are not so valuable. If the answer is that it should aim to do both, then which shall hold the principal place, giving character to the method of the school? It is probable that the true method exists in neither extreme, but in a judicious combination of the two.

Another purpose is the training of the moral nature of the child. This is involved in all rational training of the will. The question of method here is complicated by the inability of many persons to distinguish between moral and religious teaching; and, in the second place, by the inability of all persons to embrace any one specific and definite religious faith. If the religious faith of all people were the same, the question of method of moral training would be a much simpler one.

This brief and incomplete statement of the purposes of the school may serve as a basis for some conclusions as to the kinds of books the teacher should study.

A teacher's reading should follow two distinct lines;—one toward the goal of professional knowledge and skill, and the other having for its end general culture.

Professional knowledge is the knowledge of the theory of teaching; professional skill is a practical knowledge of the art of teaching. The theory or science of teaching is a derived science, having for its basis the science of the human mind. It

is the essential condition of any respectable attainments in the theory of teaching that a person be familiar with the history of the mind's growth, and know the conditions of activity, the processes and the products of each faculty, and the laws in obedience to which these powers act. The book that contains most of what the teacher needs to know, together with much that is of no practical value to him is "Elements of Intellectual Science," by Noah Porter, LL. D., President of Yale College. This book should be studied with discrimination. An analysis of the contents, setting forth those chapters and sections which need to be studied and in what order, would be a valuable service to one not acquainted with the subject or the book. It is not in the purpose of this paper to make such analysis, but I shall be glad to give to any one who may desire it, the result of my experience in teaching this text.

One of the best books on the science of school education that I have read is "Education as a Science," by Alexander Bain, of Aberdeen University, Scotland. The reader needs to be on his guard against accepting too implicitly some of the psychological doctrines set forth, but the book is very suggestive and valuable.

On the philosophy of education in general, there is no book equal in merit to "Rosenkranz's Pedagogics," published by D. Appleton & Co., New York. The value of this book has been greatly increased by an addition of seventy-six pages in the form of an appendix, containing a paraphrase of the first part, and an essay on Educational Psychology, by Wm. T. Harris, LL. D.

There are but few books printed in English on the History of Education.

The article, Education, in the new edition of the Encyclopedia Britannica, by Oscar Browning, is an admirable short history of "Educational theories in the chief crises of their development." Also, a later book by the same author entitled, "History of Educational Theories."

This article has been reprinted in a little book by Professor W. H. Payne, of Michigan University, making it convenient of access to all teachers. An appropriate book to follow this is

"Essays on Educational Reformers," by R. H. Quick, LL. D., Lecturer on Education in the University of Cambridge, England. The fullest history of education in the English language is to be found in Henry Barnard's Educational Journal. This work is very large and too expensive for most teachers.

"The Cyclopædia of Education," by Kiddle & Schem, New York, is a work of great value.

A little book entitled "Some Thoughts on Education," by John Locke, is a book of intrinsic value and remarkable for the influence it has had in molding modern education. A small book by Herbert Spencer, entitled "Education: Intellectual, Moral, and Physical," is widely read and is very suggestive.

There are numerous books on the art of teaching. That a science grows from the corresponding art is shown by the numerous publications setting forth the "How to Teach," and the few, as yet, that undertake to formulate a "Science of Teaching." Among the most valuable books on methods are: "Methods of Teaching," by John Swett; "Methods of Instruction," by J. P. Wickersham; "On Primary Instruction in Relation to Education," by S. S. Lourie, of Edinburgh University; and "Theory and Practice of Teaching," by David P. Page.

"Outlines of Educational Doctrine," is a small book recently published, from the pen of W. H. Payne, A. M., of Michigan University. It is a very valuable contribution to educational literature, and should be studied by every teacher.

Among the best books published on "School Supervision" and "School Economy," are those by Prof. W. H. Payne and J. P. Wickersham.

There is a flood of professional magazine literature printed each month, some of which is valuable, but much of it is not worth the reading. A bi-monthly magazine published in Boston, entitled "Education," is a magazine of great value.

I have named above what seem to me to be the best professional books for the teacher. He should know what is set forth in these, if he would know the *profession* of teaching. He can work along by "rule of thumb," and satisfy the public without such study; but if he is an earnest, conscientious, and intelli-

gent person, he can not satisfy himself without a deeper knowledge of the reasons for his rules of procedure. It is to this class that this paper is addressed.

There is another line of study for the teacher which should aim at general culture. He should know what the inheritance is into which he has been born. This signifies that he must know the achievements of the race in every field of action. He studies history to find out what man has done in combination with his fellows, and how he has done it. He studies literature and art to learn what discoveries have been made in the realm of spirit. He studies science to know what has been discovered in the realm of matter. Thus he comes into possession of his inheritance.

In the line of independent study the following works are suggested. In the following lists there has been no design to do more than to name some of the good books and a few of the great ones with which the teacher should be familiar :

HISTORY.—The Bible; Rawlinson's "Ancient Monarchies"; Freeman's "Historical Course," embracing the History of Greece, of Rome, of France, of Italy, of Germany, of England, and of Scotland; Plutarch's "Lives"; Grote's "History of Greece"; Gibbon's "History of Rome"; "The Intellectual Development of Europe," by Dr. Draper; "The Philosophy of History," by Hegel; "The Fifteen Decisive Battles," by Creasy; "Ten Great Religions," by Jas. Freeman Clarke; "History of the Reformation," by D'Aubigne; "The Rise and Progress of the English Constitution," by Creasy; "A Short History of England," by Greene; "A History of Our Own Time," by Justin McCarty; "Life of Columbus," by Washington Irving; "Life of Washington," by Washington Irving; "Constitutional History of the United States," by Von Holt; "Lectures on the Study of History," by Goldwin Smith.

The field of literature is a large one. It may aid in the classification of the books to be read, to separate it into the three divisions of prose, poetry, and fiction :

PROSE.—The Bible; Plato; Bacon; Emerson; Burke; Car-

lisle; Daniel Webster; Macauley's Essays; Blackie's Self-Culture.

POETRY.—The Bible; Homer; Dante; Shakespeare; Goethe, "Faust"; Milton, "Paradise Lost"; Tennyson, "In Memoriam," "Idyls of the King"; Longfellow, "Evangeline," "Tales of the Wayside Inn"; Lowell; Wordsworth; Bryant; Whittier.

FICTION.—Walter Scott, "Ivanhoe," "Heart of Midlothian"; Goethe, "Wilhelm Meister"; Victor Hugo, "Les Misérables"; Dickens, "David Copperfield," "Dombey and Son," "Old Curiosity Shop," "Bleak House"; George Elliot, "Adam Bede," "Daniel Deronda," "Romola"; Thackeray, "Vanity Fair"; Hawthorne, "The Scarlet Letter," "Marble Faun"; Irving, "Bracebridge Hall"; Bulwer, "The Historical Novels."

POPULAR WORKS IN SCIENCE.—"Origin of Species," Darwin; "Man's Place in Nature," Huxley; "Principles of Human Physiology," Carpenter; "Mental Physiology," Carpenter; "Sound, Heat, Light," Tyndall; "Elements of Geology," LeComte; "Popular Astronomy," Newcombe; "International Science Series," D. Appleton & Co.; "American Science Series," Henry Holt & Co.; "Comparative Zoology," James Orton.—*State Superintendent's Report.*

A CHAPTER ON CLEANLINESS IN THE SCHOOL ROOM.

T. W. FIELDS, RIDGEVILLE, IND.

A NATION is civilized in proportion to the amount of soap it uses," is a saying that has been attributed to Liebig, the German chemist. We can not vouch for the accuracy of the authority, but our own observation among individuals and families, goes far toward confirming our belief in the correctness of the declaration.

Most certain are we that in school districts where great indifference is manifested in regard to personal attention, the people lack correspondingly in other qualities of refinement. When the same disregard is plainly noticeable inside the school-room

and on the school premises, it does not speak well for the people of the district nor the teacher. Reform is necessary in this district. The first step toward a higher refinement is attention to cleanliness. The teacher should be the prime mover in this enterprise. A few judicious efforts will accomplish marvels even during one term of school. We call attention to a few points that the young teacher who is desirous of doing his duty in this matter, may know how to begin and what to look for.

Cleanliness of Person.—The teacher who finds it necessary to institute reform in the matter of cleanliness can, perhaps, insist with greater authority to start with, on sufficient attention being paid to the person. His own appearance should be an example in this particular entirely beyond reproach. Let him first provide the school with water-basin, towels, soap, glass and comb. If the school trustees will furnish them, so much the better. He should then tell his pupils in a general way what he expects of them, and when he finds one who is negligent in the matter, he should require that one to properly prepare himself for school.

Attention to the hands, nails, face, teeth, neck, and ears, are special points for the teacher's observation. The hair must not be overlooked, for sometimes the little folks are in such hurry to get to school that they "forget" (?) their morning toilet. The use of cils should be discouraged as dressing for the hair by either girls or boys.

The clothing comes in next for inspection. It will hardly do to cast any reflection on the condition of wearing apparel as it comes from home, but the teacher can prohibit plays that soil and otherwise disarrange the clothing. He can see that dust and mud are removed. He may tell them how particular soldiers are when on parade, and thus beget a pride in them to keep clean. Patched or thread-bare clothes should have no disrespectful allusion made to them by the teacher. No criticism on the kind of clothing should be made or allowed. Train the children to keep their shoes and boots clean. Keep scrapers at the door, blacking and brushes in the hall, and they will not be slow to learn their uses.

ital of Alabama; Tallahassee, twenty miles north of St. Marks, its port, is the capital of Florida.

5. Pyrenees. Alps, Seine, Loire, and Garonne.

6. The Po. Mediterranean and Adriatic.

7. Behring, Ochotsk, Japan, Yellow, and East China.

8. The Baltic Sea is northeast from the Strait Gibraltar; London is southwest from St. Petersburg. In the Mediterranean Sea, south of France. In the northern part of Russia Rome is on the Tiber, in Italy.

9. The place on the earth's surface where the sun's rays are vertical on the 21st day of June.

10. Rocky Mountains. Alps.

GRAMMAR.—2. Compound personal pronouns are formed by joining the words self and selves to the possessive forms of the first and second person, and the objective forms of the third person. They are used in the nominative and objective cases.

4. The direct object is the thing directly affected by the action of the verb; the indirect is the person or thing remotely affected by the action of the verb, or in reference to which the action of the verb is directed. The direct effect becomes the subject of the verb in the passive voice, as: They sent him a message. A message was sent him.

6. Co-ordinate connectives are pure conjunctions. There are three classes: copulative, which connect the meaning of the elements joined and add an idea; distributive, which disconnect the meaning and subtract an idea; adversative, which contrast the meaning. To this list some authors add the illative, which connects elements expressing cause and effect.

8. Who, that marks the fire still sparkling in each eye, but would deem their bosoms burned anew?

This is a complex, declarative sentence.

Grammatical subject—*who*.

Grammatical predicate—*would deem*.

Object—(that) their bosoms burned anew. (Substantive clause.)

Adjuncts of subject { that marks the fire still sparkling in each eye.
(Relative clause.)

Adjunct of predicate { but (adverb of negation, having the force
of not.)

Analysis of Relative Clause.

Grammatical subject—*that*, (relative pronoun.)

Grammatical predicate—*marks*.

Object—*fire*.

Adjuncts of object { *the* (adj.)
still sparkling in each eye (partic'l phrase.)

Analysis of Substantive Clause.

Grammatical subject—*bosoms*.

Grammatical predicate—*burned*.

Adjuncts of the subject—*their*.

Adjuncts of the predicate—*anew*.

Analysis of Participial Phrase.

Participle—*sparkling*.

Adjuncts of participle { still.
in each eye.

9. Sheridan, Pitt, and Fox all drank hard, and worked hard; they were all great in the councils of the nation, but not one of them could rule his own household—*London Atheneum*.

There is authority both for the insertion and omission of the comma after Pitt in the above sentence.

PENMANSHIP.—1. Three: by angles, as in the part of small *u*; by short turns, as at the base of *u*; and by oval turns, as in *o*. One and a half spaces.

2. *j, g, f, y, and z*.

3. To name the principles employed in forming the letters, and to state their position and manner of connection.

4. Two spaces. Three spaces.

5. Capital stem, direct oval, and inverted oval. Short letters, loop letters, and semi-extended letters.

MISCELLANY.

The Newport schools celebrated Longfellow's last birthday.

N. W. Bryant opened a 3-month normal at Acton, March 20th.

Allen county held an institute the week beginning March 26th—the first in three years.

The children in the Indianapolis schools contributed nearly \$500 to aid the flood sufferers.

A. N. Higgins and V. E. Livengood have decided to open a 10-week normal at Veedersburg, April 3.

The Convention of the County Superintendents of Eastern Indiana held a meeting at Muncie March 29th.

J. Fraise Richard, of Ohio, and S. P. Neidigh, Supt. of Brown Co., will begin a six-week normal at Nashville, May 14th.

The Goshen schools closed their winter term March 23d, with a public examination and a public exhibition. A. Blunt, the Supt., is doing a good work.

The next National Educational Association will be held at Saratoga, N. Y., beginning July 9th. This is the first instance of holding the association two successive years in the same place.

THE CENTRAL NORMAL, at Danville, is doing well. The enrollment this term exceeded 400. The Spring term will open April 3d, and the prospects are flattering for a large attendance.

✓ Prof. Jesse H. Brown, Supt. of Drawing in Indianapolis schools, will hold an institute in Indianapolis for instruction in drawing in all its features, beginning June 20th, and continuing four weeks.

The Bloomfield high school is another that was omitted from the published list of those commissioned to send graduates to the State University without examination. Theo. Menges and E. W. Poindexter are associate principals.

From the new edition of Messrs. Geo. P. Rowell & Co.'s American Newspaper Directory, which is now in press, it appears that the newspapers and periodicals of all kinds issued in the United States and Territories now reach the imposing total of 11,196. This is an increase of 585 in twelve months.

WABASH COLLEGE.—An attempt was recently made to burn one of the principal buildings connected with Wabash College, at Crawfordsville. The stairway was drenched with coal oil. The fire and water together did much damage. Three students were arrested for the crime, and have confessed their guilt. They are now out on bail.

✓ PORTLAND is to have a permanent private Normal and Business Institute. A new building with dormitory will furnish ample facilities. Geo. Suman, of Fort Recovery, Ohio, is to be principal. K. van der Maaten, for the past three years one of the teachers in the Hadley-Roberts Academy, Indianapolis, is to be one of the instructors.

The *Eclectic Teacher* has at last "turned its toes to the daisies." It was published at Lexington, Ky., and was a "Southwestern" journal. It was started in 1876, so its life has been far beyond the average school paper. Within the last fifteen years not less than *ten* educational papers have been started in Indiana and failed. It is an easy thing to *start* a paper, but not an easy matter to maintain it.

Later.—Since writing the above it is learned that *The Teachers' Guide*, an Ohio educational paper of a few years' standing, has—laid up for repairs. They all do it—nearly all.

HENDRICKS COUNTY.—Graduation from the district schools has been made a complete success in Hendricks county at the first at-

tempt. There have been 80 graduates. The graduating exercises have in all cases been attended by crowded audiences. The preparation for final examinations has proved a stimulus, not only to those directly interested, but to the whole school. The questions used were but little less difficult than those submitted to teachers, and the marking was just as close; and the per cent. of more than half the graduates was above ninety. Supt. Dobson and teachers all deserve credit.

John Cooper, superintendent of the Evansville schools, did a good thing for the Ohio River flood sufferers, and at the same time gave the children a good lesson in practical benevolence, by asking that each child in the public schools should contribute *one potato*. Of course each child brought the largest potato he could find, and some brought more than one. The result was 161 bushels of the largest potatoes ever seen in so large a quantity. In addition to this the school children contributed several boxes of clothing and \$200.00 in money.

STATE NORMAL SCHOOL.—From the late annual report of the State Normal School we learn that the attendance for the year ending October 31, 1882, was as follows: Winter term, 256; Spring term, 424; Fall term, 280; average term enrollment, 302; total enrollment, 960. This is a large attendance for a strictly normal school, where none are admitted without declaring their intention to teach. There are but few State Normals in the United States so large. President Brown, in stating "the purposes for which normal schools are maintained," makes a strong plea for such institutions. The present term of the school is very full, and everything is harmonious. The last Legislature passed a law by which the annual income of the school will be \$20,000 a year instead of \$15,000 as heretofore.

PERSONAL.

John W. Perrin is principal of the Newport schools.

Henry Gregory, Jr., is principal of the Leavenworth schools.

Geo. Sand closed a successful school term at Rossville, March 2d.

B. W. Everman, late of the State University, has been appointed Supt. of Carroll county, to fill the unexpired term of T. H. Britton.

H. C. Ingram has been elected to the vacancy in the Paoli schools caused by the resignation of J. L. Smith—this instead of what was said last month.

Prof. L. S. Thompson, of Purdue, is organizing a summer school for Art Study in Europe.

V. Stephenson, formerly of Brazil, is now teaching at Yankton Agency, Greenwood, D. T.

E. F. Sutherland, late principal of the Paoli schools, is now in business at Springville, Ind.

W. H. Clemens, Supt. of the Tipton schools, made the Journal office a pleasant call recently.

J. F. Compton, formerly of Perrysville, is superintendent of the schools at the Yankton Agency Indian schools at Greenwood, Dak. Territory.

J. A. Piper, who was for many years one of the leading teachers in Kosciusko county, has moved to Starke county, and is now teaching there.

J. A. C. Dobson, Supt. of Hendricks county, says that he will not be a candidate for re-election. He proposes "to give the boys a chance."

Will J. Hartman, of Terre Haute, was recently married to Carrie E. Van Pelt. Miss Van Pelt was a student in the Normal School, but was teaching the past winter.

Frank P. Conn, former superintendent of Vanderburg county, has been selected as deputy of State Supt. Holcombe. Mr. Conn is an intelligent gentleman, and will fill the position with ability.

J. Fraise Richard, of Mansfield, O., well known to many readers of the Journal as an institute worker and educational writer, has nearly ready for the press a work entitled, "The School and Institute."

A. W. Brayton, of the Indianapolis high school, after an attack of sickness that kept him in doors, most of the time on his bed, for eighty-one days, is again out, but not yet ready to resume his school duties.

Prof. Robert Kidd, the noted Indiana elocutionist, recently called at the Journal editorial sanctum, looking hail and vigorous. He has just completed a revision of his book on elocution. Prof. Kidd is always a courteous, affable gentleman.

Clarkson Davis, for many years the worthy principal of Spiceland Academy, is now in Jacksonville, Florida, trying to recuperate his failing health. Mr. Davis is one of the best educational men in the state, and it is to be hoped that his health will be fully restored, that he may again return to his chosen profession.

John M. Bloss, ex-State Superintendent, has accepted a position in the State Normal School. Whether this arrangement is permanent or simply for the present term, owing to the unusually large attendance, can not at this writing be stated.

Dr. Edward Brooks has tendered his resignation of the Pennsylvania State Normal School, located at Millersville, to take effect at the close of the present school year. Dr. Brooks is one of the leading normal school men of the country, and is also a popular author.

State Supt. Cochran has resigned, and Mr. Gass, a graduate of the State University, has been appointed to take his place. The cause of the resignation is not stated, but may be easily inferred when it is stated in Michigan the salary of the superintendent is only \$1000 a year.

L. D. Barnes, a graduate of the State Normal School, and a teacher well and favorably known to many readers of the Journal, died at his home, Cannelton, Ind., of lung trouble, January 30th. Mr. Barnes was a young man of many excellent qualities and highly respected by all who knew him.

J. J. Mills, assistant superintendent of the Indianapolis schools, who has been on the sick list for some months past, is now better in his general health, but has lost entirely the use of one eye. His physician has prescribed absolute rest for a time, and the school board has granted him leave of absence. Mr. Mills will have the sympathy of a large circle of educational friends.

J. W. Holcombe, on March 15th, succeeded to the office of State Supt. of Public Instruction for Indiana. Mr. Holcombe is the youngest man that has ever filled this important office, and the perseverance and energy that placed him there will do much toward achieving success in the conduct of the office. The Journal calls upon all teachers of all parties to join with him in a united effort to keep the educational interests of Indiana in the van of all the states.

BOOK TABLE.

The School News, published at Indianapolis by H. D. Stevens, is what its name indicates—a paper filled with news selected with special reference to use in the schools. Send stamp for sample copy.

Deaf Man's Friend, is the name of a paper published in Chicago by N. E. Derby, at \$1 a year. The number before us is full of interest to any one who cares to study the avenues to the mind through other than the five senses. The deaf are made to hear and the blind to see.

The Normal Mirror, a 4-page, 4-column paper, edited by A. C. Hopkins, who is well known to many readers of the Journal, is devoted to the interests of the East Illinois College, at Danville, Ill.

The Atlantic for April contains its usual literary treats. Among the contributors to this number are Henry James, Jr., Oliver Wendell Holmes, Charles Dudley Warner, Thomas Bailey Aldrich, and Richard Grant White. With such contributors can a magazine fail to be first-class?

The St. Nicholas is, *par excellence*, the youth's magazine of this country. The best writers for boys and girls contribute to it. The serial, "The Tinkham Brothers' Tide-Mill," by Trowbridge, now running, is worth the subscription price for a year. It is published by the Century Co., Union Square, New York.

The Century Magazine is still in the lead and growing in prosperity. It has a larger circulation than any other magazine in this country. So rapid has been the increase in circulation that the March issue has been entirely exhausted, and a new edition is being prepared. *The Century* is in every sense a first-class magazine.

Harvard Examination Papers. Corrected and arranged by R. F. Leighton. Boston and Chicago: Ginn, Heath & Co.

This little volume contains the questions used in the examinations for admission to Harvard College since 1860. To any one expecting to enter Harvard, or to any one preparing students for admission thereto, this volume will be particularly helpful.

Studies in English Literature. By M. W. Smith. Cincinnati: Van Antwerp, Bragg & Co.

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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

MAY, 1883.

No. 5.

THE IMAGINATION.

[An address delivered before the State Teachers' Association by H. S. Tarbell, Superintendent Indianapolis Public Schools.]

THE power of the mind which is able to operate upon elements furnished by the memory so as to form new wholes from their parts, we call imagination, and a royal faculty it is. In ordinary use the word "imagination" carries our thoughts to the "poet's eye in a fine frenzy rolling," or in humbler frame, to the boy bestriding his stick, which he calls a horse; to the girl with her doll which is to her beauty and companionship. We forget the solid grounds which it treads between these limits, and how largely it enters into all our mental action. It is so protean in its manifestations that no part of our mental furnishing has been more variously described.

I think we shall be near the truth if we describe the imagination as the faculty which takes the concepts existing in the mind, and selecting according to its own laws elements from several, combines them into new wholes. It may also, like a lens, magnify any object it chooses. It is the faculty of ideal creativeness; the power of mental re-combination, the magnifying and the minifying power. It gives us the unknown in analogy to the known; it represents the future in terms of the past, the distant in resemblance to the near. In short, amplifies our mental life and gives it range in time, space, and intensity. By its power of introduc-

ing additional qualities, it gives life and interest to inanimate objects and makes nature vocal with harmony and truth. It makes intelligible truths descend into the forms of sensible nature and so dwell in habitations convenient to our visits. It is one of the earliest of the faculties to blossom and bear fruit. Perception and memory put forth their leaves earlier; but judgment and reason are plants of later growth.

The child's life is, to the imagination, a congenial soil, and an exuberant growth comes in all rich natures. Youth is the period of acquisition; and perception and imagination are the two servants who fill the mental storehouse. For the young these servants work diligently, but must be humored somewhat, if they do their best. The child must put his own fancy into his plaything before it fully satisfies him. The crooked stick is a better horse than the affair with rockers.

One of the most valuable impulses to action is the sense of delight in the products of one's own activity. Nothing else seems so much one's own as his own ideal creations. Imagination, therefore, gives the best development to the sense of delight in action. It has a perceptive power as well as a creative. It looks upon the world and in all things reads the underlying thought. Imagination, the clear-sighted eye of the mind, sees through the transparent covering of the thing the thought embalmed in it. When we see a man's face we read there a history. We see his struggles and know whether he has warred with sensuality, or selfishness, or ambition, and whether he has lost or won.

Kepler, gazing long and thoughtfully at the stars, read there the laws of their motion and revealed to man what had been known to God only. Reverently he exclaims, "O God, I think Thy thoughts after Thee." The Hebrew Psalmist, with the same devotion, tells us that "night unto night sheweth knowledge." These are illustrations of the penetrating power of the imaginative eye. Imagination is the torch-bearer showing the way to reason, who follows her haltingly with measuring line and compass. It is the current of electricity which, carried to the platinum points of the senses, irradiates the dark world.

Things express God's thought as words do our's. The poet who would show us the beauty of the sunset takes up into his soul the indwelling spirit of beauty in the scene, and then in words through whose transparent forms we see the hues of the gorgeous sky, creates an embodiment for this spirit. This recreation, like a free translation, has the clear words expressed, and the doubtful, untranslatable ones omitted, and so gives us a paragraph in which we see the thought much better than in the original text from which the poet read, and it becomes to us truer and fuller than our own meager translation.

But besides these thoughts already bodied forth in nature are thoughts born in the soul itself—souls they are as yet unclothed with bodies. The imagination seizes upon the fittest body for the new soul, and so enshrines it. Thus all moral terms, all forms of spiritual thought will be found to be borrowed or appropriated from the world of sense. It is the imagination which thus finds dwelling places for our ideas and becomes the organizing power which establishes our language and gives words their contents. From the higher language of the supersensible world we are debarred except as imagination opens the way. All this higher language is formed from the materials of the lower by the assimilating power of the imagination as the foliage of the tree is formed from air and earth by the organizing life within it. When the imagination of a race using a language has ceased to vitalize it, it is dying, if not dead. The bodies of thought may be recognized by us and the memories of the sweet spirits within them may come to us, but those spirits are gone—we commune with them no more.

While the imagination of the race has thus bodied forth its highest thought, only that of the individual can make them fresh and living to himself.

I have already referred to the imagination as an early developing power; and yet for its sustained exercise considerable maturity and culture are required. It is fancy rather than imagination which shows its sportive light in the eyes of our children. Fancy, as I understand and use the term, is the pure and simple form of the power, its original development. Imagina-

tion is fancy sustained by the will and guided by the judgment. Fancy is sportive imagination; imagination is serious fancy. The one is the spark from the anvil; the other, the fabricated form. Fancy is the unbroken colt; imagination the well-trained horse. Fancy is our Simian ancestor dwelling in the leafy trees; imagination is the modern citizen in his well-constructed house. Imitating Dr. Johnson, we may say, if the flights of fancy are higher, imagination continues longer on the wing. If of fancy's fire the blaze is brighter, of imagination the heat is more regular and constant. It is fancy, rather more than imagination, which Shakespeare describes in *Midsummer Night's Dream*, when he says :

"Lovers and madmen have such seething brains,
Such shaping fantasies that apprehend
More than cool reason ever comprehends.
The lunatic, the lover and the poet
Are of imagination all compact;
One sees more devils than vast hell can hold—
That is the madman; the lover, all as frantic,
Sees Helen's beauty in a brow of Egypt;
The poet's eye, in a fine frenzy rolling
Doth glance from heaven to earth, from earth to heaven;
And as imagination bodies forth
The forms of things unknown the poet's pen
Turns them to shapes, and gives to airy nothing
A local habitation and a name."

One reason why the child shows so much more fully than the adult his fancies is, he has a less vivid sense of reality. Judgment and experience do not curb his flights. To him the line between the real world and the ideal is a shadowy one; just as we scarcely know at times whether we are waking or dreaming. If the child's fancy draws its heat from pure sources its ebullitions will clarify the nature. In their childhood, nations create their gods. Again, the feelings of children are more intense than ours, unless we become stirred to our heart's core, as we rarely do. How we loved and hated when we were young. How burned our indignation at wrongs against which we now scarcely protest. This intensity is really a quality dependent on the imagination. The child embodies virtues and nobilities in its friends until they become deified. So, the lover. A really

warm heart can coexist only with an imaginative brain. The child often lives an ideal life and swells with aspirations the noblest. Let such aspirations be cherished. The dreams of the boy may become the purposes of the man.

Do you remember how your school-boy training companies fired you with military ardor?

"O, were you ne'er a school-boy,
And did ye never train,
And feel that swelling of the heart
Ye ne'er shall feel again?"

It is the satisfaction which the mind takes in the creations of fancy that often throws a glamour around things in themselves repulsive. The horrid gargoyles on churches and fountains please us because we see them to be the creations of the imagination. It is the *image* of danger which pleases. The unimaginative man never delights in adventure.

If reason be the king, imagination is the queen of the faculties, and her favorites rise faster in the realm than any others. Memory may be the mirror in which we see the past; but imagination is the kaleidoscope which gives us visions of beauty and symmetry the mirror never shows.

Preceding the action of the imagination and conditioning it, come perception and memory; by its side works reason; and over all is will. It is imagination which gives foresight. The ancients so valued foresight as the guardian and civilizer of man that they gave the name Prometheus (foresight) to the only god who seemed to care for men, who brought fire from heaven for the shivering wretches, taught them the arts, and exposed his own life in their behalf. Foresight is possible only when the imagination gives the mind beforehand the images of the things that are to be. Looking at these images the mind can study their details and determine the requisites for their realization. An unimaginative man neglects to provide for some contingency; some essential to success is omitted. The unexpected happens to him. All great strategists, whether in peace or war, have been men of active imagination.

Those who would deal successfully with others, need the

power of entering into their thoughts, feelings, and purposes. Only when you put yourself in his place by the transporting force of imagination, can you judge his cause or read his heart. Men harshly just are of unimaginative mould. Reason gives them the wide relationships and links the acts to the unbending verities, but sees not as imagination would the modifying circumstances. Without imagination, man is a cold, plodding, humdrum being, working like a machine, juiceless and well-nigh joyless. The imagination lifts the mind from the actual and carries it to the realms of ideal creation. It adds force to reasoning, elevation to character, gives anticipation its power, spurs on the sober pacing judgment, opens the hand of charity, gives conscience its edge, prayer its wings, and life its light.

No one ever succeeds in personal improvement without a standard to which he constantly strives to lift himself. This ideal is the rainbow of promise, ever advancing and alluring. The elements of this ideal will depend upon the character and surroundings of the individual; but the completeness and definiteness of it, the constancy and force with which it will appeal to him depends upon the power of the constructive imagination. Our ethical ideal is always something higher than our life. By our imagination we rise above experience and the level of daily living to what might be and ought to be. How much we are elevated by this ideal, by this view of ourselves in our possibilities let every one answer, but notice that to the imagination we are indebted for this elevating influence. Indeed, all human progress is conditioned on the inspiring influence of imagination. All our worship is likewise thus conditioned. Our conception of Deity is built up in the revolving years by this plastic power. As it is written, man shall not live by bread alone, so the mind shall not thrive on facts alone. The True is joined by the Beautiful to the good, and we are more likely to come to the dwelling-place of the good by the path of the beautiful than by the highway of the true.

To conceive of imagination merely as the power of embellishment and gratification of the æsthetic taste is to give it a very restricted field. More than to any other faculty we apply the

term genius to the largely developed imagination. Its products are often truer than the truth. Insight is the result of its possession. It is the quality of the products of imaginative genius to be true, in many senses, and through a large range in height and depth. So the Bible, so Shakespeare, are books which give you clear thought and truth, whether you glance along their surface, look through their mass, or explore their depths.

I need not tell you that the imagination lies at the basis of all art, and makes the distinction between the copyist and the creator. Its exercise upon works of art is productive of refinement of taste and elevation of character. It may be used to turn the mind from things base and narrowing to those higher and purer emotions which give to human life its best pleasures, and to human character its grandest excellencies.

Taking a view some will deem more practical, let us consider for a moment how dependent upon his imagination the workman is for his skill. Hugh Miller tells us that among his fellow-workmen was one who always surpassed him in the amount accomplished. He was no stronger, nor more industrious, nor apparently more skillful, but night by night showed to Miller's great vexation a greater number of stones hammered for the arch. After much perplexity, Miller tells us he accounted for this on discovering that this workman had a power superior to his own of seeing within the rough stone the outline of the finished form, and so was able to make his blows tell better.

There are few types of mind among men. Those whose thoughts are occupied with sense perceptions, and their mental associations those of contiguity of time and space. A second class, with lively imaginations but no depth, play among these surface things and group them into shapes, fantastic, odd, interesting and unreliable. Then there are those who see the general truth involved in every particular, who look beneath the surface of things, whose mental habits of association are those of cause and effect. These are broader minds. John Stuart Mill and Sir Wm Hamilton are examples of the deeper men of this class. The fourth and highest class are those who combine the clear sense-perceptions of the first class, and the lively imagination

the second, with the profound generalizations of the third, and hence are able upon the plane of the common mind to embody in sensible forms their deep philosophy. Examples of such minds are Darwin, Shakespeare, and (I mean no irreverence) Jesus Christ. The common people hear them gladly and the philosophers study them with profit.

Each class has its own limitations widely differing. If we dwell in the ordinary concrete, we are common-place; if we descend to the general, we are dry. Only by abstracting from the concrete the general truth it contains, and then rehabilitating it in the ideal concrete can we escape these limitations. Every great work of art individualizes the general, and so has the value of the general and the interest of the special.

In the degree in which one has imagination, in that degree is he interesting. Burke was an orator profound in thought but lacking imagination, and of him Goldsmith said:

"Who, too deep for his hearers, still went on refining,
And thought of convincing while they thought of dining."

A speech should be like a pond lily. It may derive its strength from the depths, but all its beauty and value should lie on the surface.

WHERE DOES THE DAY BEGIN?

EUGENE MUELLER.

NOW, sir, here is a question that will get you and the whole fraternity, I think. I heard it in the wilds of the West, and it was without an answer. No matter whether it be new or old, it is the most puzzling question I ever heard. Several lawyers, doctors, and ministers could not explain it.

A man leaves Indianapolis at 12 M. to-day and travels westward directly under the sun, at the rate of a little more than a thousand miles per hour. To-day is Friday—he knows that—and when he gets to Denver he is told it is 12 M., Friday; at San Francisco he is told the same thing, and in Japan, too, probably. When he gets to Indianapolis again he is told it is

Saturday noon—12 M. Now, sir, the question is, where will he meet the first man who will say it is Saturday? He must have met him before he got to Indianapolis, because when it is 12 M. Friday at Indianapolis it is about 12:46 P. M. in New York, and must have been 12 M. when the man passed there, and so on. How can this be straightened out and explained?

If this proposed traveller from Indianapolis west with the sun should be able to call for the day loud enough for all the persons on his right and left to hear him, after leaving the United States the first response, Saturday noon, would come from the Russians at Behring Strait, and from the British on Chatham Island. He would hear both Friday noon and Saturday noon, until he reached the coast of Japan, when all would answer, Saturday noon.

The change of date is explained in but few text-books, and questions about the International Date Line are often asked, but are seldom answered. The following gives a few facts, and may clear up some of the difficulties:

The rotation of the earth upon its axis causes the change of day and night; it also brings about a difference in the hour of the day of two places that are east and west of each other. Places north and south of each other, or lying on the same meridian, will have the same time. At Leipsic and Venice the clocks show the same hour; the same is true at Memphis and New Orleans, and at the mouth of the Yenesei and Madras. But on account of the rotation of the earth from west to east the place to the east will have sunrise, noon, and sunset before its more western neighbor. This will amount to four minutes in time for every degree of distance traveled. Thus, when it is 6 A. M. at Indianapolis, it is 12 M. at Paris, and 5 P. M. at the mouth of the Yenesei.

For this reason a ship sailing from the east to the west would, on its arrival at the starting place, be a whole day behind in its date. The clocks would be fast one hour for every 15 degrees traveled, and, being set back, would lose 24 hours for the 360 degrees traveled around the earth. In reality the ship and its passengers have lost one rotation of the earth. If the ship sail

to the east, on its arrival at the starting point, its date would be one day ahead. The ship has made one more rotation than the earth around its axis.

The first ones to experience this were Elcano and his companions, who landed Thursday, July 10, 1522, on the island Santiago, of the Cape Verd group, with the *Victoria*, the last remaining ship of Magellan's expedition. Elcano's log-book showed Wednesday, July 9, 1522. On the return of these first circumnavigators of our globe to Spain, the Venetian Ambassador Contarini offered the correct explanation for the "lost day." He was derided and laughed at by the wise men of Salamanca. Yet, two hundred years before the Arabian scholar, Abulveda, (1273-1331) had foretold this result. He said: "Suppose two persons make a journey around the world, one to the east and one to the west. On their return home, the one who went to the east would find his date one day ahead, while the one going to the west would find his date one day behind."

When it is Monday, March 12th, 12 M. at Indianapolis, it is Tuesday, March 13th, 1 o'clock A. M. at Behring Strait. There exists on our globe a difference not only in the hour of the day, but also in the name and the date of the day; and this is found between places having a sufficient difference in longitude.

Let us station ourselves at any point, for example at Indianapolis, during 12 o'clock noon, and think of the time at the cities near the fortieth parallel. Going eastward we will meet with cities where it is already afternoon, and coming to the one hundred and eightieth meridian we find it just midnight. In a moment the next day will begin here. Going westward we find it to be morning, and coming to the one hundred and eightieth meridian, we find it to be midnight of the previous day. In a moment the present day will begin here. Then for this point 180 degrees to the east and 180 degrees to the west, there are two ways of reckoning the time, which differ by 24 hours. For this point there must be two different dates and days of the week. But a point on the earth can have only one definite day. Therefore there must be on every parallel, for what is true of the fortieth is also true of every other parallel, a point where the date

makes a leap of 24 hours. Two places on opposite sides of this changing point, though differing but little in the time of the day, will differ in the name and the date of the day. Persons living at these points are not always aware of this fact. The good father Alphonsus Sanctius, who once lived at Manila on the island of Luzon, near the Chinese coast, went to the city of Macao, distant only half an hour, where he expected to arrive on the second of May and to celebrate St. Athanasius' Day. On landing he found to his astonishment that the Portuguese priests were celebrating St. Dago's Day on the third of May.

Several questions may now arise. We started from Indianapolis; but as we may start from any point on the parallel, the question may be asked, where is this changing point of the day really found on this parallel. As such a parallel may be drawn through any point of the meridian, there will be a number of such changing points between the north and the south. These points may be connected by a line, a line that marks the change of date on the earth. The questions arising may be summed up in the following: Where does this line exist, what is its direction and form, why do we find it there, where it actually is found, as theoretically its points might be at any spot of the earth?

We shall not find this line in Europe, the seat of modern civilization, where the Christian method of reckoning time originated and whence it spread in all directions; but rather in that part of the world where the streams of emigration, moving partly to the east, partly to the west, were compelled to meet on the side opposite to Europe; and indeed here, in the Pacific Ocean we really find it. The local time of these places, fixed by the passage of the sun over the meridian, could not be changed; but the name and the date of any day was determined evidently by whether the place received its reckoning from the east or from the west.

The Spaniards on their voyages of discovery sailed to the west around South America; they entered the Pacific from the east, and their islands have the day later than Europe. The Dutch, Portuguese, and English, however, took the opposite direction and sailed around the Cape of Good Hope, entering the other

hemisphere from the west, and their islands have the day earlier than Europe. Thus it is that the islands occupied by the Spaniards are one day in reckoning behind those occupied by the Portuguese and Dutch. This is noticeable especially in the vicinity of the Molluccas, where the Spaniards and Portuguese are neighbors. The event spoken of above as happening at Macao is an example.

These circumstances determine the position and direction of the date line. It passes through Behring Strait, west of the Aleutian Islands, east of Japan, west of the Philippines, making at this point a sharp turn to the right, then north of Borneo, New Guinea, east of the Solomon and Feejee Islands, crossing the 40th degree south latitude east of the 180th meridian east from Greenwich. If on the east of this line it is Sunday, the first of a month, west of it, it is already Monday the second.

If a ship which is making a voyage around the world wishes to have the same date as that of the port from which it started, it is necessary to add a day, if going to the west, and to drop a day if going to the east. This should occur on passing the date line. But shipmasters generally make the correction on passing the 180th meridian from Greenwich. This meridian crosses the date line near its most eastern points.

Sailing from the east and passing the meridian Saturday, June 15th, the ship's log-book would show for the next day Monday, June 17th; there would be no Sunday for that ship. But coming from the west the log-book would show Friday June 14th, Saturday June 15th (I), Saturday June 15th (II), Sunday June 16th.

On account of the peculiar curve of the date line it may happen that the date of two places may differ as much as two days. Thus Manila to the east of this line and Gilolo to the west of it, differ but half an hour in the time of the day. If it is Sunday the 31st December, 1882, 11:30 P. M. at Manila, it is 12 M at Gilolo and January 1st, 1883, as Gilolo is on the other side of the line. One minute later it is 11:31 P. M. Sunday at Manila, but at Gilolo it is 12:01 A. M. Tuesday, January 2d, 1883.

As the date line does not coincide with any meridian, there must be some point which receives the name of the day before all others. This, most likely, is Chatham Island, 177 west longitude. The Philippines, 123 east longitude, receive the name the last. The name of the day remains on the earth at present about 30 hours.

THE ELEMENTS OF GOVERNING POWER.

BY E. E. SMITH.

THE VINE AND ITS BRANCHES.

3. *Strength of Fiber—"Backbone."*—If there be no strength in the fiber of the vine, it is likely to be tossed about by every wind that blows. You sit down expecting to enjoy its shade, and the slightest breeze exposes you to the glare and heat of the unwelcome sun. Or, at the height of a storm, when it is expected to be clinging firm to its own supports and sustaining its branches, all go down together in a pitiful wreck.

So in the school there must be a uniformly firm, reliable, controlling will, to which in all rightful things other wills must yield. If possible, this submission should be like that of every good citizen to lawful authority—cheerfully given for the general good. The feeling should be general among the pupils that it is to their advantage for self-culture, to their advantage for progress in their studies, and to their advantage for accomplishing the objects aimed at in their school life, that they should be controlled and guided in the things that are for their good, and restrained when tempted through ignorance by capricious ideas, improper desires, or unworthy motives.

To this end it is highly important that there be uniformity in the duties required and steadiness in the control exerted by the teacher. The pedagogue who is stern, exacting, and arbitrary on one day, and complacent, indifferent, and "easy" the next, must of necessity meet with trouble in his empire. If it is not injurious to the school to have whispering, a little disorder, or a little fun to-day, the pupil will readily conclude that it is not

wrong to-morrow; and so, when the fretful temper or the aroused conscience of the teacher hews to the line to-morrow, the pupil thinks him inconsistent and harsh, and rebels at the restraint.

If you take a fine spirited colt, not fully broken to the harness, and let him trot along free and easy one minute and then whip him up or jerk him back the next; if you tighten the check-rein up till he is painfully conscious of its presence to-day and loosen it so that he hardly realizes it is upon him to-morrow; if you uniformly back him into the shafts one week, and as uniformly pull the shafts to him the next; if you are gentle and forbearing and kind with him at one time, and rough, impatient and cruel toward him at another—in nine cases out of ten you have a vicious, balky, headstrong horse that will sulk or kick out of the traces at the first opportunity. Now child-nature and colt-nature are not unlike in these matters. A quick eye, a steady head, a firm adherence, and an unhesitating requirement of submission to the law of right, will soon lead the pupil to have confidence in your integrity, to respect your decisions, to understand your purposes, and to work harmoniously with you, because he realizes that it is to his own interest to do so.

The possession of "backbone" means also that the teacher shall not be disturbed or turned from right plans of government or instruction because of complaints or fault-finding on the part of those who are ignorant, prejudiced, or desirous of having "influence." This does not mean that no attention should be given to these, nor that respect should not be shown to the opinions of others when they are courteously given. None of us are so wise that we can not learn from others. We should weigh well and honestly both our own plans and the suggestions of others. If we are right unquestionably, we must hold to our course or decline the responsibility of the school. If we are wrong, we should at once seek the opportunity to "let ourselves down gracefully" in all cases where a principle is involved. If it is a mere matter of expediency, it is often wise to yield temporarily to the opinions of others, even though satisfied of their erroneousness. But whatever course is taken should be taken in a straight-forward, dignified, manly way. There should be neither false humility

nor unseemly bombast. If truth and right are with us, we can afford to bide our time, satisfied with our own self-respect and with the opinion of others that we are honest and sincere.

It must be apparent that the teacher who is wavering, hesitating, hunting the popular side, or who cowardly dodges responsibility, will lose the respect of pupil and parent, will never feel confident of being on the winning side, will be frequently inconsistent and vacillating, and will arouse in the school distrust, dislike, and disorder. "Unstable as water, he can not excel." His unwisdom lies in the fact that whatever authority he exercises is painfully apparent, whereas the control of the skillful teacher is felt rather than seen. The grasp need not be any the less firm because the hand is gloved.

4. *Fresh Air—Pure Life.*—All human life is associated. Our words, our deeds, the outcome of our lives, mark greater or lesser epochs in human history according to our associations. We all muddy the stream some from which those that come after us must drink. "He that says he has done no sin is a liar, and the truth is not in him." Yet the lonely, unhonored, unwept death of Benedict Arnold has deterred many from treason to friend or country. They do not care to "point a moral or adorn a tale." And from the martyrdom of the honored and loved Lincoln and Garfield come new births to patriotism in the Republic.

The vine that receives no fresh, warm, moisture-laden, healthful air must sicken and its branches must become dwindled, puny and unproductive. The life put forward as a model (as that of the teacher is), which has no higher aim than the satisfaction of animal wants, which aspires not to do nobly its part in the drama of existence, which receives no inspirations to rise to the height of the great argument of life wherein one may unselfishly pour out his own soul that the current of all life may be raised to a higher level,—such a life is a failure and worse than a failure. The teacher is placed before the child not merely as an instructor in the legal branches, but as a guide to that path which shall end in a successful life. No life is successful whose light is shut off from others by the gates of death. The teacher is recreant to the trust put in him if his teaching and his example make it

all of life to live. The age in which we live is devoted too much to providing for temporal pleasures. From dust we came and to dust we must return, but that is no reason for spending our lives groveling in the dust. Not that we should not labor. The man is false to his manhood and the woman to her womanhood who does not cheerfully take up and bear even more than a fair share of the burdens of life. But the soul should not be wrapped up in these things. Immortality is its heritage. In youth, the imagination is already reaching out toward a happy future. Trustfulness is manifest. The teacher, then, must go beyond the child's understanding, and, with the aid of imagination and trust, lead it to the highest end of education—immortality.

To the accomplishment of this end the teacher's character must not be merely negatively good; it must show a positive, earnest, personal influence for the good, the beautiful, and the true. He does not put up the whining plea of Cain, "Am I my brother's keeper"? for his position makes him responsible for an unnumbered host of the great brotherhood of man. How careful, then, that each word, each familiar expression, each act, should speak to the young of purity, sweetness, and hopefulness! This begets trust. And are we not all willing to be guided by those in whom we have confidence?

A woman of many words, fond of gossip and current rumors, but not of bad heart or intentions, came to realize that she had wounded many tender spirits, had saddened many sensitive lives, and had alienated many former friends. She went to her white-haired pastor whom all loved as "a man after God's own heart," and with tears in her eyes confessed her wrong and asked if he could suggest something to help her change her course. The good man gave her a small bag filled with feathers and told her to go home scattering here and there a handful of the feathers. She did so, and then returned to him. "Now," said he, "take the bag and gather up all the feathers you have scattered." She at once replied that it was impossible. The winds had tossed the feathers hither and thither, separated them the one from the other, and taken many far beyond her reach. "So," said he,

"is it with the words you utter. The breath of men scatter them far and wide, disconnect and distort them, and they can never come back to you. They become factors in the lives of others." The incident has its own moral.

Out of the good influence of a pure life will gradually but surely grow that most powerful factor in school government, a "school conscience." Imperceptibly but not the less firmly will the law of right be fixed in each pupil's mind as the gauge by which he shall measure his own actions and the actions of his mates. This results in loyalty to the school, a jealous care that nothing shall injure its reputation, and a hearty desire to be co-laborers with the teacher in securing results worthy of approval. The teacher who creates this feeling and justly and wisely uses it, has a moral force in his government which few pupils will care to face. The one who is indolent, insubordinate or disrespectful is regarded as a disturber of the peace and harmony of the school, and receives neither sympathy nor support from his fellows.

In addition to these things, that life which is actuated by the noblest purposes must ever accomplish the highest results. If, whilst we till the soil of the fields and forget not seed-time and harvest, our eyes look not beyond the fences that hem us in, we are but slaves. The body is master, and life is but a dreary round of toil, anxiety, weariness, and sorrow. We must not be "vine-dressers and husbandmen who think the corn we grind and the grapes we crush better than the gardens of angels upon the slopes of Eden"; nor must we be "hewers of wood and drawers of water, who think the wood we hew and the water we draw better than the pine forests that cover the mountains like the shadow of God, or the great rivers that move like His eternity." The higher we climb towards infinite truth, the broader will be our view of human life and the clearer our conceptions of the providential care and designs of Him "who doeth all things well."

In all this work, the child is treated as father of the man, and the aim is to make him an honorable, God-fearing, man-loving, conscientious citizen. The disposition to obey properly consti-

tuted authority, to be just in his dealings with his fellow, and to perform faithfully every obligation falling upon him, makes a citizen into whose hands the destinies of the Republic and the happiness of its people may be safely entrusted.

[To be finished next month.]

PURDUE UNIVERSITY.

DEPARTMENT OF PEDAGOGY.

This Department is conducted by GEO. P. BROWN, President State Normal School.

SCHOOL EDUCATION.

✓ **S**CHOOL EDUCATION is what the pupil does for himself and what is done for him by others in the school to prepare him for rational self-activity in the other institutions of society. It has been shown that one purpose of all human institutions is education; and that the school differs from the others in that the sole purpose is education, and in that it deals with immature minds with the design of preparing them for rational self-activity when they shall have arrived at maturity. The other institutions,—the business world, the state, the church, etc.—are the university into which each person must pass from the school, and in which he must carry forward his education. Whatever exercise in the school brings the pupil on in this preparation is a *practical exercise*.

The school seeks to realize this its ultimate purpose of preparation for self-direction, by seeking to realize as its immediate purpose three things, viz.:

1. The first and most important aim of the school is the education of the will. This is essential to any rational self-direction. This includes the education of the will (1) to hold the mind to the performance of correct intellectual processes through which the mind shall become master of the material world and the world of thought; and (2) to hold the mind to the performance of moral duties, through which it shall become habituated to limit its conduct by the rights of others.

2. The second immediate purpose of the school is the training of the mind in proper processes of acquisition and reflection. The untrained intellect is bewildered and overcome by the multiplicity of things; the trained intellect can reduce this chaos of multiplicity to an organized unity and thus master it. This power is acquired by the mind's being led in accordance with proper methods in its processes of acquisition and reflection. It is the method of acquiring that is of more importance than the fact acquired; the doing that is of more value than the thing done.

3. The third immediate purpose of the school is the acquisition of useful knowledge. Discipline of will and of intellect will result just as certainly from a correct method of acquiring *useful* knowledge, as knowledge that is *useless*. The information gained in the school should be of that kind that can be used in practice. This is the significance of the popular demand for a "practical education." The general public has never stopped to analyze the purpose of the school. In their estimation its purpose is to impart useful knowledge; and this they think constitutes a practical education. But the more thoughtful investigator sees that the really practical education is that training of will and of intellect which gives its possessor power over the world, and over himself. He sees moreover that the knowledge acquired during this process of training, should be a part, and a fundamental part of that great inheritance of knowledge which every truly useful man must enter into possession of.

✓ SCHOOL GOVERNMENT.

THE laws of a school, like those of every other thing, must be discovered by a study of its nature and purpose. A law is not a rule of action imposed upon the school from without, which the teacher can enact or repeal at will. It inheres in the organization and is as fixed and necessary as the institution itself. Without it the institution could not exist. The teacher is subject to these laws as much as is the pupil. It is the duty of the teacher to discover and state these laws and to enforce them. This is his function as a part of the organism. He can not fail

in the performance of his duties with less injury to the school than can the pupil in the performance of his.

Great responsibility rests upon the teacher. He must discover, state and enforce the rules or laws of the school of which he forms so important a part. School government is therefore of the type of absolute monarchy. Any attempt to make republicanism or democracy the principle of school government must result in failure. In a democracy it is the people who discover and state the laws of the institution in which they live. In a republic it is the people through their representatives who do this. This assumes that each individual has sufficient information and education to enable him to arrive at a correct decision as to the laws that inhere in the state, and must be obeyed if the government is to be strong and free. No such assumption can be made concerning the pupils of a school. They are in a state of non-age,—of ignorance and of immaturity of mind,—which wholly unfits them to discover and state the laws of the school, or make a rational enforcement of them.

But, while this is true, it is of great aid to the teacher to be able to show clearly to the school that what he proclaims as the law of the school is really such. The teacher's administration of the government is greatly strengthened by being able to carry with him whatever of reason and judgment the pupils possess. But impulse and caprice determine the conduct of the children more than reason, and it is through authority rationally exercised that the child is brought most safely, happily, and speedily from the state of unreason to that of reason.

These thoughts suggest the need that the teacher make a thorough study of the nature and purpose of the school. Without correct notions in regard to these it is impossible that he shall be able to discover and state the true laws of the school.

Is *silence* a law of the school? Whether "yes" or "no" shall be the answer will depend, first, upon the kind of school. Silence is not the law of the kindergarten. The purposes for which silence should be enforced are not, for the most part, the purposes of the kindergarten.

It will depend, in the second place, upon what we put into our definition of silence. If by silence is meant no noise, then we have only the silence of one sense,—the ear. But if by silence we mean the non-action of all the senses, then we have secured the most favorable condition for the exercise of reflection. The development of the power to reflect is one important result of school training, but it must not be begun too soon. In reflection the mind deals not with external, objective things, but with internal, subjective things or ideas. It is through reflection that all generalizations are made and laws and principles discovered. But reflection prematurely exercised dwarfs and deforms the mind. The study of the nature and purpose of the primary school reveals the fact that silence in this largest meaning is not the law of this school. It is the law only in a restricted sense. The objects upon which the child's mind should be engaged are the objects of the external world. This requires that there be a constant activity of those senses which are used in gaining knowledge of these objects.

But the child must begin early to gain control of himself. The will must gain the mastery over impulse and caprice. The *man* must rise to ascendancy over the *animal*. This elementary exercise of will is limited, in the primary school, to holding the mind to the execution of certain tasks and duties assigned, and its consequent abstraction from other things. The child must not communicate with his fellows. He must learn to work alone. This is the true significance of the law of silence in the primary school. When carried further than this and made to include restraint from all movements of body or of things, it becomes irrational and harmful. The noise of industry is appropriate in these schools. To attempt to enforce perfect silence is wrong, for the reason that it keeps the energy of the child divided between his work, and anxiety to escape the reproaches of the teacher for his practicably unavoidable transgressions of the rules of silence, and for the additional reason that it gives unnecessary pain, both physical and mental. There is so much of pain that is needful in bringing the animal self into subjection to the will or rational self, that all unneccessary pain should be avoided.

BUT as the pupil advances into the higher grades, he comes to deal more with the objects of memory and imagination and less with the objects of sense. This is the elementary stage of reflection. During this period he must learn more and more to remand all the senses to the state of unconscious activity, and refuse obedience to their promptings when the nature of his task requires that he make use of these internal objects. This elementary stage of reflection is a particularly difficult and trying stage for both teacher and pupil. The young mind is not naturally impelled to reflect. The effort is laborious and repulsive, and therefore painful. Any rational use of the objects of memory and imagination results in the formation of another class of mental objects which are called general notions or concepts. None of these reflective activities are so easy and interesting as are the activities of sense. But the child must be accustomed to the exercise of them if it shall become educated. The transition period in which the mind is habituating itself to a new and repulsive mode of action is the period which calls, more than any other, for wise and experienced teachers. To know how long to hold the pupil to this work of reflection,—how to make the most of the pleasures that attend it,—how to minify its attendant pains,—when to give relief by the introduction of a study that appeals to the senses,—requires that the teacher be a master of the science of the soul, and that he have that practical knowledge and skill which comes only through professional training. It is in this transition period which is bounded by the fourth-year grade on the one side and by the second or third year of the high school on the other that our ablest *teachers* should be called to labor. Mere scholars, if such must be continued as teachers, should teach only in the upper grades of the high school. A lower grade of mind and of attainment can learn to do well the work required in the primary school. They need, however, a clear conception of the relation of the primary work to the work above, and they must have mastered those psychological laws that prevail in the acquisition and retention of knowledge. In this transition period there are times when perfect silence in its fullest

meaning is the necessary condition of progress. These times are dependent upon the nature of the subject in hand.

THE preceding discussion has been made from the stand-point of the purpose of the school as an agency in the training of the intellect.

There is a moral reason why silence is the law of the school. Each pupil has a right to his time. No other pupil has a right to rob him of it, therefore. That the pupil does not appreciate the value of that right, is no reason for his not being protected in its exercise. It is rather the greater reason why he should be thus protected. Here is a field which affords opportunities for the training of the will to right moral conduct, that are not found in mere intellectual culture.

HISTORY.

✓ In a former article it was shown that history, in the wide application of the term, has for its peculiar subject-matter the world of human spirit in its free development; also that it is a fundamental branch of learning because it removes the individual's natural limitations in time, and thus enables him to live through the whole historical period of his race.

Some branch of universal history must introduce the student to this line of study, reveal to him its intrinsic interest and value, give him correct methods of acquisition and imbue him with the spirit of reverent historical inquiry. In the public schools of this country, United States history is made the gateway to this field of study. But if these were the only ends sought in our schools, the history of almost any other people or nation would serve the object as well; and that of England or any of the leading European nations would be far better suited to the ends. Aside, then, from all general considerations, what are the special reasons for teaching United States history in the public schools? The immediate practical result sought is good American citizenship. The study of the history of England, France, or Ancient

Greece, or Rome, gives opportunity for every form of mental and moral discipline peculiar to history. Any one of these will furnish examples of almost every form of government, and of every principle of political science. But no one of them would lay directly the foundation for good active membership in this nation. The state is primarily concerned in preparing the student for intelligent and conscientious American citizenship.

In this country, where all are not only citizens but equal political factors as well, the requisites of good citizenship are twofold; (1) a knowledge of the traditions, history, principles and spirit of our institutions of government; and (2) a conscientious regard for the highest good of the whole, in the exercise of all political power held by the individual. It is the peculiar work of American history to supply these requisites. It fails of its direct object if it does not give this knowledge and impel its students toward principled participation in the affairs of state. It seeks to arouse and stimulate that somewhat indefinable, but not less real, something called the American spirit or idea.

In addition, therefore, to giving certain kinds of discipline of mind, imparting valuable moral lessons, and establishing correct habits and methods of studying history—all of which may be accomplished by studying any leading branch of general history—this subject seeks to give the peculiar knowledge and inspire the particular spirit necessary to the healthful operations of our free government.

What portions of the subject and what methods of study are best designed to promote this result, will be made the subject of another short article.

W. W. PARSONS.

TEACHING A SCIENCE.

V
Is there a science of teaching? Whatever may be the answer to this question, it will be generally conceded that there are but few scientific teachers. The number who can give a reason for their methods of procedure that would be deemed satisfactory by a mind accustomed to apply the tests of scientific reasoning to his conclusions, is painfully small. One would need no other

evidence than is presented in the discussion of topics in our educational associations, to prove the general want of scientific knowledge of their vocation among teachers. And what is most remarkable is that many of those occupying the most conspicuous positions in the schools, and who have served the public long and faithfully, manifest in their treatment of educational problems so little of that power of analytic reasoning which scientific investigation demands. Judged by our discussions and papers we would seem to be ignorant of the elementary principles of a science of teaching. This can be explained only by the fact that there is no real belief in the existence of such a science. It is a mythical something, much talked about but never seen except by a few "impracticals" who are forever talking in an unknown tongue. Any educational discussion that seeks to find bottom reasons for processes pursued is "abstract and tiresome." "Give us something *practical*" is the demand. As if it were not the most practical thing in the world to find out the truth and error in our methods of procedure. There are some who are beginning to grow gray in the service, but who have made no other study of their profession than the observation of the results of certain experiments, but have attained some valuable "practical" knowledge in this way, who are impatient with any effort at a scientific investigation of educational questions.

Every science must have its peculiar technic. There are many ideas peculiar to it that only technical terms will name. The law and medicine have them, and without them the discussion of legal and medical questions is not carried on. All of the natural sciences and the sciences of man have them, and could not be expressed without them. Whenever the mind in the study of any science seizes one of these peculiar ideas it looks out for some peculiar word to express it. Scientific knowledge is not repulsive to the master of that science. None other would be endurable to him because of its inadequacy to express the thought. It is only when there is insufficient knowledge of the science to see the necessity for technical terms, that they are repulsive.

THERE is another pernicious heresy which we have heard advocated by persons of large influence in educational affairs. It is that the teacher is not to consciously pursue a scientific method in his teaching. He is told that it is all well enough to make a scientific study of method in his preparation in the normal school, but when he comes into the practice of teaching he must forget all this and throw himself into his work with that self-abandon which will drive out of his consciousness all thought of the way he is doing his work. What nonsense! It is only when the mind has become habituated by conscious and repeated effort to the pursuit of truth by the proper method, that it can be safely left to its spontaneous action.

We hold that there is a science of teaching; that it consists of a body of ideas, many of which are peculiar to and characteristic of the science; that there is need, therefore, of the use of technical terms to express these ideas; and that the use of these terms to express these ideas is a great aid to clearness of thought in this science.

OFFICIAL OBLIGATION OF COUNTY BOARDS OF EDUCATION.

THE student of pedagogy is not less interested in the study of official duties, than in the investigation of professional obligations. Obedience to official obligations by those intrusted with the legislative and appointing power in our school system is a factor of no less importance than the adequate discharge of professional duties by the teacher. Without both, school education can never thrive. The time is near at hand when county boards of education must elect a county superintendent of schools for a term of two years.

In the present stage of advancement of educational science among teachers, the efficiency of the work done in the country schools depends largely upon the fitness of the superintendent for his position. The cardinal virtues which this officer should possess are Honesty, Capability, and Faithfulness in the discharge of duty.

The man possessing these in the highest degree will be elected by every county board of education that is faithful to the trust committed to it. Party politics has no claim to consideration in determining this question so vital to the interests of the schools of a whole county. Church affiliations have nothing to do with it. The trustee who votes for a candidate upon these grounds betrays the trust confided to him by his township. If one candidate is known or believed to be more honest, capable, and faithful in the discharge of duty than the others, and is a democrat, every republican trustee who is faithful to the educational interests of his county will join with the democratic trustees in electing him. If this candidate is a republican, every democratic trustee who is faithful to the educational interests of his county will join with the republican trustees in electing him. All political parties are alike interested in having the best possible administration of this important office. The great value of an efficient superintendent to the schools of a county can be best known by comparing the schools of a county that has elected such a superintendent for a series of years, with the county that has not. If this difference could be made as apparent to the county boards as it is to those who have had opportunities to make this comparison by actual visitation of the schools and institutes in the different counties, there is little doubt that all county boards would seek for the best available man without regard to the accident of party politics or denominational preference. There should be neither political nor religious test for this office.

County boards of education should also refuse to change a tried and efficient officer for one untried except for the best of reasons. The longer a superintendent, possessing the qualifications above enumerated, can be induced to remain in office, the better for the schools. In this office the principles of civil service reform should be rigidly enforced.

But, on the other hand, there are men holding this high office in the state that are grossly incompetent and unfit to be intrusted with its administration. In some of these counties any change whatsoever will probably be for the better. Let the official ax fall.

PRIMARY DEPARTMENT.

[This Department is conducted by LEWIS H. JOXES, Prin. Indianapolis Training School.]

PRIMARY NUMBER.

NOTATION.

METHODS of teaching primary number have been greatly improved within the last few years. The constant use now made of objects for illustration has enabled pupils to form their number concepts with a perfection impossible when the instruction was given in the abstract. Many teachers who use objects skillfully in illustrating numbers and processes, do not so well understand how to carry objective illustration into the teaching of how to represent numbers,—especially how to represent numbers larger than nine.

It is intended, in a series of short papers, to show how this subject, usually so confusing to children, may be made entirely clear to pupils ranging from six to nine years of age. These suggestions do not rest solely on theory for proof of their correctness and value, nearly every point suggested having been successfully taught by the writer or those under his charge, to pupils of regular classes of the age named.

The ideas here mentioned form a connected line of *number representation*, or notation, but not a regular succession of *lessons*; since practice in the fundamental operations, and in the solving of problems must be freely mingled with the learning of notation. It is proposed in this paper to develop the one line of thought—number representation in the decimal scale,—and to leave the consideration of the other topics connected with the teaching of primary number till another time.

Suppose the pupils of a class have performed the fundamental processes with numbers involving sums, minuends, products, and dividends as large as nine but no larger; and that they have no perfected knowledge of any larger numbers. The teacher prepares herself with the requisite objects, such as cigar lighters, wooden tooth-picks, or sticks made by cutting twigs into uniform length and removing the bark. If twigs are used the back should

a day, B \$4.00, and C \$3.00. They complete the work in 90 days and receive equal pay each. How many days does each man work? Solve by analysis. 5, 5.

GRAMMAR.—1. Write a sentence in which a clause is used as a noun in the nominative case. 10

2. Decline *I* and *boy*. 5, 5.

3. How many terms are implied when an adjective is used in the comparative degree? The superlative? 5, 5.

4. How do you distinguish in use between *shall* and *will*? 10

5. Give a sentence containing a participle with the construction of the noun and the modifications of the verb. Explain. 5, 5.

6. Give the classes of adverbs. 10

7. Correct: Him who is studious shall improve. We are not so much to be blamed as him that upset the boat. 5, 5.

8. The captain stood in for the shore. Parse *stood* and *in*. 5, 5.

9. Punctuate: Purity of style and an easy flow of numbers are common to all Addison's Latin poems Macaulay. 2 off for each error or omission.

10. Write a sentence containing an infinitive and a participle, each used as a noun. Analyze it. 2, 2, 6.

PENMANSHIP.—1. Give your method of distributing the copy-books to the class. 10

2. Describe what you regard as the best position of the body. 10

3. Name and describe the kinds of movement employed in writing. 10

4. Define the kinds of lines employed in writing. Define the kinds of curves. 5, 5.

5. Analyze *t*, *k*, *g*, *i*, *x*. 5, 2 each.

NOTE.—Your writing, in answering the above questions, will be taken as a specimen of your writing, and will be marked 0—50.

ORTHOGRAPHY.—1. Into what three classes are the elementary sounds of the English language divided? Give two examples of each. 2 pts, 6, 4.

2. How many and what sounds has *ck*? Write words illustrating these sounds; two words to each. 2 pts, 6, 4.

3. What is the sound of *u* in *institute*? In *fulfill*? In *hundred*? 3 pts, 3½ each.

4. Write each of the following words phonetically, and indicate each accented vowel sound by the proper diacritical mark: *through*, *piecemeal*, *heyday*, *Tuesday*, *guidance*. 5 pts, 2 each.

5. Name the following punctuation marks: - — ^ : " " 5 pts, 2 each.

6. Spell twenty words dictated by the superintendent. 20 pts, 2½ each.

Pupils should now have a few minutes practice in counting out ten sticks, and placing the rubber band over them, thus constituting them a ten of sticks. This process is perhaps the best physical analogon of that mental process of reducing the ten similars to one, that it is possible to give a child; and it is very essential that this first attempt of his to construct a unit of the second order should be thoroughly well done.

When all are ready for the advance step, take up the one ten of sticks in one hand, and the remaining stick of the eleven in the other, and stand them on the ledge and let them lean against the blackboard, so that pupils can place figures directly over them. Place the bundle of sticks at the left of the one stick, and about as far from it as the left hand figure one in 11 ought to stand from the right hand figure one. Ask "Who can come and write a figure one just over the one stick?" All are anxious to do so, for writing figures on the board is a treat to them, and Susan is called. Then, "Who can write a figure one just over the one ten of sticks?" Jennie does so. "Who can come and touch the figure one that is over the one stick?" "Who can point to (or touch) the figure one that is over the one ten sticks?" After many have pointed in this way, sometimes to the figure one that is over the one stick, and at other times to the figure one that is over the one ten; then slightly alter the question, thus: "Who can touch the figure one that *means* the one stick?" or "Who can touch the figure one that *means* the one ten?" for, by the law of association, each figure one *has* come to *mean* to the child precisely what it is placed over.

While this form of question is being used, incidentally remove the one stick, but have pupils go on rapidly pointing out the figure one that means the one stick; then remove the one ten of sticks, but keep up the pointing as before, except that the one stick and the one ten of sticks which each figure one means respectively, is not now in sight, but only remembered. The two figures are exactly alike now, except in *place*, the exact distinction which has to be made in representing numbers in the decimal scale.

Next place at the board one ten of sticks and two sticks, and have pupils write a figure two over the two sticks, and a figure

one over the one ten of sticks. Have the pointing exercises as before, the one ten and three, and the pointing exercises.

Although pupils do not know the names 'fourteen,' 'fifteen,' etc., yet they can now represent any number to twenty, if the objects are properly shown, and they can read such numbers as 'tens' and 'ones.' In a subsequent lesson they learn the full value of these numbers, and how to read each one in two ways.

The next paper will show how to proceed from twenty to one hundred.

THE phrase "development of the mind," is one in frequent use with a large class of teachers. The frequent use of the term is not reliable proof that it is well understood.

The application of the term "development" to the mind, is evidently a figure based on analogy. It seems that the derivation of the word might throw some light upon the nature of that analogy, and, possibly, show some hidden truth which is involved in the word as now used.

Develop, which by composition with "ment," has become "development," is composed of the two quite distinct parts, "de" and "velop." The latter has substantially the same meaning in three or four modern languages, and one or two ancient ones; viz., "to wrap up," "to enfold," or "to place a covering over." The syllable "de" is negative in its meaning, and implies a reversal of the process indicated by the remainder of the word; so that "develop" (or "development" when it means an action), must mean "to remove the covering from."

This process may first have been noticed by some one with reference to plant life. If one were passing through the woods, the foot might remove the leaves or small sticks from some struggling plant, and thus "develop" it. The obstructions being thus removed, the sunlight might reach the leaves and warm the soil about the roots, the stem might bend freely in the breeze, bringing the leaves into contact with the necessary gases, and causing the roots to fix themselves more firmly in the soil.

The change in the growth and perfection of the plant under the new conditions is very marked; and should the same person

repass he might notice the changed result and ponder upon its cause. At least many such cases would cause people to do so, and at length the word "development" would signify "the supplying of all those conditions of sunlight, warmth, moisture, soil, etc., which a plant needs for its growth and perfection."

Soon this enlarged application of the word would be made to the growth and perfection of animals; and later, doubtless, to that of *mind*.

By analogy, then, the phrase "development of the mind" names the process of supplying those conditions which mind needs as a stimulus to its educational actions; as the name of a product, it names the perfection induced by the mind's own actions, when the proper conditions for such action are supplied.

But the mind in every case reaches its perfection through its own efforts. It is the teacher's business to supply the necessary conditions and motives for those actions which have the greatest educational value. These mental activities should succeed one another throughout the school life of the child, in well-graded series, each one of which is the preparation for those which are to follow until the fruit is apparent in matured powers and *developed* character.

It takes a philosopher to give instruction that is at once simple and vivid. Each idea taught by the instructor must needs be constructed by the mind of the learner. This requires mental activity of the pupil; and this activity should be positively directed to definite ends. These ends should lie clearly outlined in the consciousness of the teacher. Each step toward their realization should be taken in the clear light of a fair understanding of the nature of the mind, and the needs of exciting and directing its creative power in pupils. Every word, look, or movement of the teacher becomes significant when viewed as a stimulus to the mind of the pupil in the creation of thoughts and the formation of character. This adaptation of means to ends in controlling and directing the processes of thinking, feeling, and willing, is the appropriate field of methods. This mutual action and reaction of the mind of teacher and pupil, constitutes *teaching* for the former, and *learning* for the latter.

OFFICIAL DEPARTMENT.

[From the Letter-Book of the Superintendent of Public Instruction.]

TO A TEACHER.

[Letter-Book G. 202.] You ask whether a teacher who has made a contract to teach through a specified term can legally resign by giving two weeks' notice.

I think a contract to teach is not different in nature from other contracts to render service, and is subject to the same rules of law as such contracts. If either party to a contract to teach dissolves it without the consent of the other, he is liable for any actual damages that such dissolution may cause to the other party.

TO A TEACHER.

[G. 214] You ask, "In case a township trustee refuses the letting of a school house for a private school, when the law has been fully complied with by the applicant and the people of the district, what shall be done?"

I think the parties interested may appeal to the county superintendent. Sec. 4537 R. S. (164 School Law) says, "Appeals shall be allowed from decisions of the township trustees relative to school matters to the county superintendents, * * * and their decisions of all local questions relating to the legality of school meetings, establishment of schools, * * * shall be final." As the law, in Sec. 4509 R. S. (158 School Law), provides for holding private schools in public school buildings, and prescribes the steps to be taken in obtaining permission to hold them, I think the language above quoted must be held to apply to the establishment of such private schools, as well as to the regular public schools.

If, therefore, the directions of Sec. 4509 R. S. have been complied with, and the trustee refuses the use of the house for a private school, you have a right to appeal to the county superintendent. If the trustee refuses to obey the decision of the superintendent, he may be compelled to do so by a writ of *mandate* from the Circuit Court.

TO A TOWNSHIP TRUSTEE.

[G. 209.] You ask whether you can be required to pay a teacher for several days during which his work was done by another person, at his request, but without your knowledge or consent.

You can not lawfully pay out any of the tuition revenue for services performed by a person not duly licensed to teach. If the person appointed by your teacher to do this work during his absence held a valid license in force at the time the work was done, I think you may

properly allow the regular wages for his services. The teacher ought to have consulted you before making such an arrangement, yet you should consider the circumstances of the case, and, if there was reasonable cause for his action, I think it would be right for you to allow him his pay, provided always that the substitute was a licensed teacher.

TO A COUNTY SUPERINTENDENT.

[G. 220.] Your question is as follows: "In case a teacher fails to teach the number of days for which he was employed, what becomes of the money for the remainder of the term? Can it be held over for the same school next year?"

Answer: Section 4499 R. S. (26 School Law), provides that "the tuition revenue apportioned to the school shall be expended within the school year for which it was apportioned." The apportionment here mentioned is not an apportionment in the strict sense in which the term is used when referring to that made to the counties by the Supt. of Public Instruction, and that made to cities, towns, and townships, by the county auditor; but merely means an informal estimate by the trustee of the amount of money needed for each school or district. A district is not a corporation, and does not acquire a right to any definite share of the revenue, which belongs to the corporation as a whole. If, therefore, a teacher terminates his engagement so near the close of a term that it is inexpedient to employ another person to complete the term, the money designed by the trustee for that school remains in his hands, to be applied to payment of expenses of the other schools in his corporation, and that part of it derived from the tuition revenue must be expended within the school year.

You also ask: "Has a town school-board the right to give the white children of the town the benefit of an eight months school, and the colored children only seven months? Can the school board and colored citizens make an agreement of this kind?"

Answer: Section 4496 R. S. (page 65 School Law), provides that "the trustee or trustees of such township, town, or city, may organize the colored children into separate schools, having all the rights, privileges, and advantages of all other schools of the township, town, or city." I think that the expression "all the rights, privileges, and advantages of other schools" clearly makes it the duty of trustees to furnish colored children, as far as may be possible, school privileges for an equal length of time with the whites. I do not see how the consent of the colored people themselves to any other arrangement can relieve the trustees of this duty to the colored children. It is the duty of the State to give them equal educational advantages with white children, whether they demand them or not.

TO A TEACHER.

[G. 226] Several of your questions I can answer as follows: Under the law, it is clearly the duty of the trustees of an incorporated town to appoint school trustees for the corporation, and I think they can be compelled to do so by writ of mandate from the Circuit Court.

In case the township trustee continues to control and manage the schools of an incorporated town (no town school trustees having ever been appointed), I think that, under the general principle that an officer shall continue to perform his duties till his successor is appointed and qualified, he would be liable on contracts made by him in exercising such control and management.

TO A COUNTY SUPERINTENDENT.

[G. 243] I think that a boy who works out by the year, and, so far as is known, has no parents or guardian, should be enumerated in the corporation where he lives and is employed at the time the enumeration is taken. In the column for names of parents or guardians should be written "none."

The above opinions have been given by me within the last thirty days.

April 15, 1883.

JOHN W. HOLCOMBE,
Sup't Public Instruction.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

Does your subscription to the Journal expire with this issue? If so renew at once, that there may be no break in your file.

Several of our enterprising newspapers have within the past month made the announcement that Prof. J. Baldwin, formerly of Kokomo and Logansport, this state, and for several years principal of the Missouri State Normal School, has been elected president of the Sam Houston Normal School, at Huntsville, Texas. The Journal made this announcement in its September issue of 1881, about the time Prof. Baldwin removed to Texas.

Many of the readers of the Journal who desire to make teaching a science and not a mere form, will take pleasure in reading the article on another page by Prof. Tarbell, on "The Relation of the Imagination to Education."

OUR NEW DEPARTMENTS.—The Department of Pedagogy, conducted by Pres. Brown, of the State Normal School, has received so many high commendations that it is not necessary to call further special attention to it, and yet there are things in this issue that no teacher can well afford to omit.

The Primary Department, which appears for the first time this month, will commend itself to any one who will read it. Lewis H. Jones, who has it in charge, is a graduate of the Oswego Normal School, was for several years Professor in our State Normal School, and is now Principal of the Indianapolis Training School. No person in the state is better qualified to make this important department just what teachers need.

WHAT IS MEANT BY GOOD MORAL CHARACTER?—A teacher, in order to obtain a license to teach, must establish a "good moral character." A saloon keeper, in order to secure a license to sell intoxicating drinks, must prove to the county commissioners that he is a person of "good moral character."

While the language of the law is the same in both cases, in the minds of most people there is a marked difference in the standards applied. The ideal standard for the teacher should be "a character worthy the imitation of confiding, innocent boys and girls." The county superintendents have no higher duty than to provide for the children teachers of high moral character.

The superintendent who refused to revoke the license of a teacher who had been drunk on the ground that he was never drunk on the school premises, certainly has a very low standard of "good moral character." Both teacher and superintendent should seek new fields of labor.

ELECTION OF COUNTY SUPERINTENDENTS.

The election of county superintendents will occur the first of June. This is an election that the political papers of the state will say little about, and yet it is one of great importance. The county superintendent has to do with more vital interests of the people than does any other county officer. The education of the boys and girls of a county is paramount to all other interests, and the supervision of it,

which in a large degree will determine its efficiency, should not be entrusted to incompetent hands.

Township trustees should recognize the importance of this office and realize their own responsibility in the matter. Politics, church, friendship, relationship, personal preferences, should be banished, and the *efficiency* of the candidate alone considered. The only question should be, which candidate will make the best schools? A trustee who will let any other consideration influence his vote is not worthy his office.

If the present incumbent is a good man by all means re-elect him—experience in such an office is worth a great deal. If the present superintendent is inefficient, and a better man can be found, by all means make a change; the interest of the children demands it. The best men are none too good.

For a further discussion of this subject see Pres. Brown's article. It came after the above had been sketched.

PRESIDENCY OF PURDUE.

It seems to be well settled that Pres. White can not be induced to remain at Purdue longer than the close of the present school year; so a new president must be found.

The board, at its last meeting, discussed the merits of several candidates, but reached no conclusion and adjourned without action, not to meet again until in June. This, the Journal thinks, is a mistake. While it is of great importance to the institution and to the state that a good man be chosen to fill the vacancy, it is a mistake to make unnecessary delay in making a choice.

It would be worth a great deal to the new man if he could know of his appointment a month or two before the close of the school year. An early appointment would enable him to visit similar institutions and to otherwise make special preparation for his responsible position that would not be possible if the selection is postponed till the middle or latter part of June.

While nothing is definitely settled in regard to the matter, there seems to be a conviction that the trustees will select a resident of this state. There is certainly a great deal of good material that is available. The following named persons have been spoken of in connection with the place, but they are not all candidates:

Profs. H. W. Wiley and E. E. Smith, both members of the present faculty; Rev. F. A. Friedley, President of De Puaw Female College, New Albany; Prof. J. C. Ridpath and Prof. Gobin, both of Asbury University; W. A. Jones, former Pres. of the State Normal School; John M. Bloss and James H. Smart, both ex-State Superintendents. These are all good men, and the Journal could name the best one, but it is not going to do it.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR MARCH.

READING.—1. Define articulation, and state what means you would employ to improve the articulation of your pupils.

2 pts, 5 each.

2. What is the object of silent reading? Of oral reading?

2 pts, 5 each.

3. What is essential to the correct silent reading of a sentence? To the correct oral reading of a sentence?

2 pts, 5 each.

4. Underscore the emphatic words in the following lines:

"The year

Has gone, and with it, many a glorious throng
Of happy dreams. Its mark is on each brow,
Its shadow, in each heart. In its swift course,
It waved its scepter o'er the beautiful;
And they are not. It laid its pallid hand
Upon the strong man; and the haughty form
Is fallen, and the flashing eye is dim."

5. What words and expressions in the above stanza are used figuratively?

10

6. Read the above selection, and also one of prose.

2 pts, 1 to 25 each.

ARITHMETIC.—1. What is the reciprocal of a number? Write the reciprocals of 5, 9, 11, 17, 21.

5 pts, 2 each.

2. $4 + 6 + 2 \times (7 - 3) + 9 = ?$

5. 5.

3. What are the cubical contents of a cylinder 3 metres long, with a radius of 3 decimeters?

5. 5.

4. If $\frac{2}{3}$ of $\frac{3}{4}$ of a vessel be worth \$9,000, what will $\frac{1}{2}$ of $\frac{1}{4}$ be worth?

5. 5.

5. If £28 11s 8d be divided among 7 persons, how much will each receive?

5. 5.

6. When it is noon at Washington, it is 8:20 A. M. at a certain place; in which direction, and how many degrees is that place from Washington?

5. 5.

7. A ton of ore yielded $56\frac{1}{2}\%$ silver, and $13\frac{1}{2}\%$ gold, what weight of each was obtained?

5. 5.

8. What will be the duty on a cargo of coffee, 18,000 bags of 165 lbs. each; tare 8%; duty 5 cts. per lb.?

5. 5.

9. If 9 men in 14 days earn \$1.50 per day each, what will be the rate if 12 men earn the same sum in 10 days?

5. 5.

10. A, B, and C, work on a job at different times, A receives \$6.00

a day, B \$4.00, and C \$3.00. They complete the work in 90 days and receive equal pay each. How many days does each man work? Solve by analysis. 5. 5.

GRAMMAR.—1. Write a sentence in which a clause is used as a noun in the nominative case. 10

2. Decline *I* and *boy*. 5. 5.

3. How many terms are implied when an adjective is used in the comparative degree? The superlative? 5. 5.

4. How do you distinguish in use between *shall* and *will*? 10

5. Give a sentence containing a participle with the construction of the noun and the modifications of the verb. Explain. 5. 5.

6. Give the classes of adverbs. 10

7. Correct: Him who is studious shall improve. We are not so much to be blamed as him that upset the boat. 5. 5.

8. The captain stood in for the shore. Parse *stood* and *in*. 5. 5.

9. Punctuate: Purity of style and an easy flow of numbers are common to all additions latin poems macauley. 2 off for each error or omission.

10. Write a sentence containing an infinitive and a participle, each used as a noun. Analyze it. 2, 2, 6.

PENMANSHIP.—1. Give your method of distributing the copy-books to the class. 10

2. Describe what you regard as the best position of the body. 10

3. Name and describe the kinds of movement employed in writing. 10

4. Define the kinds of lines employed in writing. Define the kinds of curves. 5. 5.

5. Analyze *t*, *h*, *g*, *i*, *x*. 5, 2 each.

NOTE.—Your writing, in answering the above questions, will be taken as a specimen of your writing, and will be marked 0—50.

ORTHOGRAPHY.—1. Into what three classes are the elementary sounds of the English language divided? Give two examples of each. 2 pts, 6, 4.

2. How many and what sounds has *ch*? Write words illustrating these sounds; two words to each. 2 pts, 6, 4.

3. What is the sound of *u* in *institute*? In *fulfill*? In *hundred*? 3 pts, 3½ each.

4. Write each of the following words phonetically, and indicate each accented vowel sound by the proper diacritical mark: *through*, *piecemeal*, *heyday*, *Tuesday*, *guidance*. 5 pts, 2 each.

5. Name the following punctuation marks: - — ^ : " " 5 pts, 2 each.

6. Spell twenty words dictated by the superintendent. 20 pts, 2½ each.

GEOGRAPHY.—1. Where are the following capes: Farewell? St. Lucas? Mendocino? Hatteras? Sable? 5, 5.

2. Name two great mountain systems of North America. Name two mountain systems of South America. 5, 5.

3. Name and locate five river systems of North America. 5 pts, 2 each.

4. Alaska: Its location? Climate and vegetation? Chief wealth? Inhabitants? Chief settlement? 5, 2 each.

5. In what zones does South America lie? Where is Guiana? To what countries does it belong? Describe the course of the Orinoco. What is the chief city of Venezuela? 5, 2 each.

6. Name the largest lake in each of the five grand divisions. 5, 2 each.

7. To whom does Farther India belong? Siberia? Cape Colony? Java? Phillipine Islands? 5, 2 each.

8. What is the difference between anthracite and bituminous coal? In what parts of the United States is coal most abundant? 5, 5.

9. Name two principal cities of Australia. The commercial ports of Japan. 5, 5.

10. What is the chief port of South Africa? What are two exports from Melbourne? 5, 5.

THEORY OF TEACHING.—1. Give reasons why a drill in spelling should be preparatory to and a part of a recitation in reading proper. 20

2. What are the points of difference between a recitation in reading in the primary and in the advanced grades? 20

3. What activities of mind must the teacher consider in teaching a child to remember? 20

4. Why is a debilitated or unhealthful condition of the body unfavorable to a vigorous activity of mind? 20

5. Why is terror or fear unfavorable to intellectual activity? 10

NOTE.—The superintendent is advised to give credit to the applicant for the intelligence manifested by his answers rather than for their conformity with his own notions of their correctness.

U. S. HISTORY.—1. Write a sketch, not to exceed two pages, of the course of events in the United States, from the adoption of the present Constitution to the beginning of the Civil War, noticing particularly the influences which prepared the way for that war. 100

NOTE.—In this sketch special attention must be given to conciseness of statement, orderly arrangement and clearness of expression.

PHYSIOLOGY.—1. What are tendons and what their function? 2 pts, 5 each.

2. Why do muscles increase in size when properly exercised? 10

3. Why is it important that correct movements be adopted in the first efforts of muscular training? 10

4. What is the effect of very cold or very hot substances upon the teeth? 10
5. What is assimilation? 10
6. Why should the mastication of food be performed slowly rather than rapidly? 10
7. Name the different stages in the process of digestion. 10
8. How do arteries differ from veins, both in structure and function? 2 pts, 5 each.
9. What are the lymphatics? 10
10. What is the effect of oxygen upon the blood? 10

ANSWERS TO STATE BOARD QUESTIONS FOR APRIL.

ARITHMETIC.—1. In the French system the period consists of three orders, one thousand being the scale; in the English system the period consists of six orders, one million being the scale.

2. *a.* $\overline{M} D C C = 1,000,700.$
b. $\overline{M} D C C = 1,700.$
c. $1,000,700 - 1,700 = 999,000.$
3. $\frac{11}{16} \times \frac{120}{13} \times \frac{3}{8} \times \frac{1}{13} \times \frac{7}{5} = 49.$
4. This question has been erroneously printed; the answer will be a mixed number, not a perfect integer.
5. $625 + .625 = \frac{625000}{1000} + \frac{625}{1000} = \frac{1000}{1} = 1000.$ This method of solution shows why the answer contains no decimals.
6. *a.* 1 gramme = .000001 c. m.
b. 1 cubic decimeter = .001 c. m.
c. Therefore a cubic decimeter contains as many grammes as .001 c. m. contains .000001 c. m., which is 1000.
7. $\begin{array}{l|l} 6 : 4 & \\ 10 : 12 & \end{array} \quad :: 750 : 60.$
8. *a.* The draft for \$1000, with 2% premium, will cost \$1,020.
b. The rate of interest for 63 days at 10 10% per annum is 1.75%.
c. Therefore $\$1,020 = 100\% - 1.75\%$, or 98.25% of the face of the note; therefore,
d. the face of the note will be $\frac{100000}{9825}$ of 1020, or \$1038.17.
9. The square root of $\frac{1}{2}$ of $\frac{1}{16}$ of $\frac{1}{16}$ by cancellation equals square root of $\frac{1}{128} = \frac{1}{8}.$
10. As the like dimensions of similar volumes are to each other as the cube roots of the volumes, and the given volumes are to each other as 8 to 1, their diameters will be to each other as the cube roots of these numbers, or as 2 to 1, and therefore the diameter of the larger sphere will be twice that of the smaller, or 4 inches.

Correct Solution of Ex. 10 in April Answers.—(a) $\frac{1}{2}$ of 9 in. = 4.5 in. radius. (b) The surface of cylinder = $(4.5 \text{ in.})^2 \times 3.1416 = 63.6174$. (c) The cubical contents = $63.6174 \times 9 = 572.5566$ cu. in. Ans.

GEOGRAPHY.—1. Zones are divisions of the earth, bounded by the tropics and polar circles. Each temperate zone is 43° in width.

2. A monarchy is a form of government where the power is vested in the hands of one person. In a republican form of government the laws are made and executed by representatives chosen by the people.

3. Mississippi (with Missouri), Nile, Amazon, Yenisei, Niger.

4. It is a little larger than the United States.

5. South America, like North America, is composed of two great highland regions and a vast low plane which occupies the interior of the continent.

6. Switzerland. Geneva is noted for the manufacture of watches and jewelry.

7. Northern Michigan and Wisconsin. Lead is found, most abundantly, in southwestern Wisconsin and parts of Illinois and Iowa which adjoin.

8. Continental islands are those which lie near continents, and appear to be detached portions. Oceanic islands are those which lie far removed from continents.

9. In minerals, exports, etc. Australia being situated about as far south of the equator as California is north of it, their climates would be very much alike.

10. The plateau of the Andes is an extensive tract of lofty table land along the tops of the Andes between the parallels of 30° and 15° south latitude, with an elevation of nearly 13,000 feet.

PENMANSHIP.—1. Select a pupil for each aisle who collects the books right and left alternately. The piles are placed on the front desks; one pupil then collects the whole, placing the backs of pile on the fronts of the next, and so on alternately, afterwards placing them in place where kept. The advantages are system and saving of time.

2. *Elements*:—Slanting straight line; lower turn; right curve; left curve; upper turn. *Principles*:—First, second, third, fourth, fifth, and sixth.

3. The chief object of correct position, is to secure freedom of movement.

4. Knowledge of the forms to be written; writing by the pupils; criticism; correction.

5. "The fore-arm movement consists of the forward-and-backward and the lateral movement of the fore-arm on the arm-rest,—that is, the muscle below the elbow,—as the centre of motion. The

combination of these two produces the oblique movements required."

GRAMMAR.—2. *It* is used as an expletive as subject in idiomatic expressions; as, It is impossible, and as the subject of unipersonal verbs affirming some operation of nature; as, It rains.

3. A qualifying adjective when used as a noun must be accompanied by an article. Adjectives when so used are in common or neuter gender, plural number, third person, and nominative or objective case.

4. The subject of a verb is the person or object of which something is affirmed. The object of a verb is the person or object on which the action expressed by the verb is expended. The object of one verb may, in some cases, be the subject of another, but it is in the objective case as related to the governing verb.

6. (a) No, I did not see him.

(b) Certainly, you are to blame.

PHYSIOLOGY.—1. The evil effects of seating pupils upon desks too high for them are many. The feet not touching the floor, the weight of the lower limb projecting beyond and hanging from the seat, causes curvature of the femur. The elevation of one shoulder above another in order to accommodate themselves to the desk produces curvature of the spine, giving a tendency to nervous troubles. The strain upon the muscles produces excessive weariness, and the digestive organs are misplaced and disturbed in the performance of their functions.

2. The tender flesh and the active spirit of a small child can not endure the restraint more easily borne by an older person. The field of observation, of thought, and of association is quite limited with a child. Its extent of study upon any lesson must therefore be brief and soon become wearisome. There is danger, therefore, of its acquiring a dislike for the school and its work unless there be frequent diversions or recesses to relieve its mind and its body.

3. Exercise for the sake of exercise is very hard work. It is mechanical, compulsory, and distasteful. It does not relieve the mind, because the mind is worried by it. It does not relieve the body, because the nerve stimulus arising from it lacks tone. In order that exercise may be beneficial, the mind should look upon it and join in it as a recreation, a diversion a pleasant change from previous habit. The merchant who goes to the country or fashionable resort for a month's "outing," and yet keeps up his business correspondence and business worry, returns unrefreshed. That boy showed both ingenuity and wisdom who, when sent to clear a town lot of stones, set up a plank at the fence and invited a number of companions

over to see which was the best marksman. The work thus became play, and its irksomeness disappeared.

4. Because of the more rapid wearing out of the tissues. A locomotive standing still does not require as much fuel as a locomotive running forty miles an hour and drawing a train of thirty cars.

7. (a) Rapid exercise causes the muscles to quickly force the blood above the valves in the veins and onward to the heart, whose motion is accelerated in order to dispose of the unusual supply. (b) This also produces a demand from the muscles for a larger supply of arterial blood, to furnish which the heart must beat more rapidly. (c) The excessive supply of blood, charged with carbonic acid, causes an increased rapidity in the beats of the heart as well as an increased quickness of breathing in order to remove the noxious element and receive oxygen.

8. Secretions are substances taken from the blood to be used in the body; excretions are substances separated from the blood that are no longer of use to the body. The gastric juice is an example of the former, the urine of the latter.

10. From 600 to 900 cubic feet of air should be allowed for each pupil in the school-room, with provisions for renewing about sixty cubic feet per hour. It is not essential that the renewal air should be cold, and it is important that it should not come as a cold draught upon the pupils.

READING.—1. The meaning of words may be taught to children, (a) by associating them with those already known; (b) by objective illustrations when practicable; (c) by explanations and illustrations which do not go beyond the child's powers of comprehension; (d) by requiring immediate and practical use to be made of words whose meanings have just been made known; and (e) by requiring definitions in accurate language after the content of the word is known.

2. Rising inflection: Is your friend sick? Falling inflection: By honesty we acquire character.

3. Strong emphasis on words not ordinarily emphatic usually requires the falling inflection. The thought to be expressed, however, and its relations must determine the character of the inflection.

ANDERSON.—The attendance in the schools increased so much that more room and more teaching force made it necessary to cut the school year to eight months; so commencement will occur May 4th, with nine graduates. Considering the fact that there have been about 100 cases of measles, and that the wife and child of Sept. Hamilton had the small-pox, and that he lost more than a month in nursing them, the schools have done remarkably well.

MISCELLANY.

WABASH COLLEGE will send out fifteen graduates this year.

THE MARENGO ACADEMY, under the principalship of J. M. Johnson, is in a prosperous condition.

A five-week normal at Rockville will begin July 16th, conducted by County Supt. W. H. Elson & D. W. Dennis.

J. Fraise Richard and county Supt. S. P. Neidigh will open a six-week normal at Nashville, May 14th, to be followed by the county institute.

THE Mongo High School held its second annual commencement April 7th, with seven graduates. Supt. E. G. Machan delivered the diplomas and made an address to the people.

SCHOOL LAWS.—As several important laws have been enacted since the last edition of the School Law, State Supt. J. W. Holcombe has issued a "Supplement" containing the new laws. It was needed

NEW ALBANY.—The reports say that all is harmonious, and that Supt. Coffin is doing good work. R. A. Ogg, principal of the high school, reports 30 graduates—25 girls, 5 boys. Who let the rest of the boys get away?

SPICELAND ACADEMY.—The attendance the present term is better than for several years previous. The year has been a prosperous one. There are four in the Senior Class. Commencement June 22. Thomas Newlin is principal.

VALPARAISO.—Public school well attended and well conducted. Nine graduates this year—all girls. W. H. Banta still holds the helm.

The Normal is overflowing. Over 2000 enrolled this term

TIPPECANOE COUNTY.—In addition to his other work, Supt. Caulkins has edited a little 8-page 2-column monthly, giving the township institute programmes, local news, and a great deal of excellent matter for teachers. This is one of the best local papers we have seen.

Frank H. Tufts, for many years superintendent of the Aurora schools, and a very successful institute worker, is now Professor of Mathematics at Antioch College, Yellow Springs, O. He will assist in conducting a summer normal in the college, opening July 23d, and continuing four weeks.

THE STATE NORMAL was never before so large. The enrollment for the present term is about 520. Three new teachers have been employed for the term. A new feature of the school is the class

composed of college graduates. In this class are graduates from four different colleges. The course is for one year, and strictly professional. It is just what graduates expecting to teach or superintend schools need.

JASPER COUNTY.—The manual of this county, in addition to the course of study, rules, etc., gives a "Roll of Honor." "All pupils who have attended their respective schools any one month without being absent or tardy, are entitled to enrollment under this honor." The record shows a marked increase in the per cent. of attendance as a result of this honor system. D. B. Nowels is county supt.

OBERLIN COLLEGE will celebrate its fiftieth anniversary next 4th of July. Oberlin was the first college to open its doors to negroes, and was the first to open the way for the higher education of women. Until recently it continued in session during the summer months and gave its long vacation in the winter that its students might occupy the time in teaching, and thus earn money to continue their college course.

LA GRANGE COUNTY.—The schools in this county this year will compare favorably with those of any year in the past. We have held two, and will hold another county teachers' association during the school year. These have done and are doing very much for the teachers, in developing a greater interest in their work, in causing them to become more enthusiastic, in elevating the cause, and in very many other ways. The La Grange (town) schools have never been in better shape than at this time, under the superintendency of Mr. Bogue. County superintendent E. G. Machan is doing good work.

STARKE CO. SCHOOL WORK.—G. A. Netherton, Supt. of Starke county, has taught 46 terms of school—including 20 normals—and during his term of office has attended and conducted all the township institutes of his county (they being held jointly by two or more townships); and he has also given to each of his schools two separate half-days' inspection. In addition he has edited an educational column in two papers. He conducted three normals last year, and is arranging to hold four this year—at North Judson, San Pierre, Knox, and Gravestown—beginning in April and closing in September. During the past winter term no teacher has been employed in the county holding a license for less than twelve months.

MADISON COUNTY.—In this county "graduation from the common schools" has proved a great success. Supt. Croan began early and worked hard, and had the co-operation of his teachers and trustees. There seems to have been not only earnest work but enthusiasm, all over the county. Examinations were held in all of the 14 townships

on Feb. 9th. There were graduates in each township, aggregating, in all, 752. The superintendent added to the interest by the offer of a "gold medal" to the pupil who should pass the best examination. Miss Anna P. Morris, of Pendleton, won this prize, which was a beautiful one, and cost Mr. Croan just \$20. The effects of these examinations and graduating exercises have been felt in every grade of the schools—even down to the primary. The meetings for the graduating exercises were all large, and the people were much interested.

The writer attended one of these meetings—the one at Pendleton, and the jam was so great about the door and in the aisles that in order to reach the rostrum he was compelled to enter through a window. The exercises of the scholars were very creditable, and Supt. Croan made an address full of good sense and good suggestions. State Supt. Holcombe was present and made a short address, which was well suited to the occasion, and was received with applause.

PURDUE UNIVERSITY.—Prof. L. S. Thompson has about completed his arrangements to join Prof. Loomis' party of art tourists in Europe. He will leave about June 15th. . . . Prof. D. G. Herron has been in feeble health for some time, but is now stronger. During his sickness Mrs. Herron heard his classes recite. . . . The Normal Term of the University Academy, under charge of Prof. E. E. Smith, opened out well. About fifty new students entered,—a strong testimonial to Prof. Smith's popularity with the pedagogues. . . . Prof. H. W. Wiley has been appointed as one of the United States chemists. He has a valuable assistant and analyst in Mr. H. W. Peters. . . . A number of the older students, with several members of the Faculty, have organized the "Purdue Scientific Association," for the purpose of preparing and reporting original essays, investigations, and experiments. The association meets once each month for reports, discussions, and criticisms. J. M. Waugh is President, and W. S. Ratliff Secretary. . . . Pres. E. E. White is busily engaged in the revision of his series of *Arithmetics*. . . . The Irving Literary Society celebrated the one hundredth anniversary of Washington Irving's birthday last month with appropriate and creditable literary exercises.

REPORT OF THE SOUTHERN INDIANA TEACHERS' ASSOCIATION.

WASHINGTON, IND., April 4, 1883.

The afternoon of April 4th was occupied by those teachers who arrived in time, in visiting the Washington schools. A card, giving all needed directions, had been prepared by Supt. Hunter, so that a stranger might know the grade of the school and the name of the

teacher in each room without question or guide. There are sixteen teachers in addition to the superintendent in these schools.

The work of the schools was good—some of it very good; this was the general verdict.

D. E. Hunter, chairman of the executive committee, called the association to order at the evening session, and in the absence of the president, W. A. Bell, of the School Journal, presided.

Prayer was offered by Rev. F. A. Friedley. The welcoming address was made by Mayor Beddoe. It had been prepared with care and was highly complimentary to teachers and the importance of their work. The response was made by W. A. Bell in an extemporaneous speech in which he made several good points and put them in such a way as to keep the audience laughing most of the time.

In the absence of the inaugural address, Prof. D. S. Jordan, of the State University, read an interesting lecture on Agassiz.

The speaker took strong ground in favor of the "development theory," and insisted that when it and the Bible are both understood there can be no conflict between them. Prof. Jordan was a pupil of Agassiz, and holds his old teacher in great reverence.

Thursday Morning.—County Supt. J. S. Gamble, the only one of the vice-presidents present, asked to be excused from presiding, and Rev. F. A. Friedley, Pres. of De Pauw Female College, was called to the chair and presided most of the session with general satisfaction to the association. After some miscellaneous business D. M. Geeting read John C. Macpherson's paper on

"SOME CIPHERING AT THE COUNTRY SCHOOL PROBLEM."

Four-fifths of the children in the schools of Indiana are enrolled in the country schools. Ohio and Michigan have $\frac{3}{4}$, Tennessee $\frac{1}{2}$, and Iowa $\frac{1}{6}$ of their enrollments in the country schools; 85% of eleven states attend ungraded schools. The question is often asked, Who ever finishes anything in a country school? Pupils are required to go over the same ground every year. The want of system does two great wrongs to the child. 1. He does not acquire all the knowledge intended for him. 2. What he does acquire is not received in a manner best calculated to symmetrically develop the mind, and therefore it is not possessed by him in the most useful form. Irregular attendance and want of sympathy at home has done much to bring about this condition of affairs.

The state laws give only the faintest outline of the work to be done. Grading is applying a course of study to the schools. The per cent. of increase in text-books from 1876 to 1878 was, Arithmetic 13, Geography 14, Grammar 35, History 45, Physiology 127. All the increase was of the adopted books and in harmony with the course of instruction, and the result of the course of study. Some of the

results of graduation are as follows: 1. There is an awakened interest. 2. More pupils are taught in all the branches and broader work is done by individual pupils. 3. Attention is called early to subjects which were heretofore neglected. 4. Time is economized; one year in six is saved. 5. There is more thoroughness in scholarship, and more aspiration among the young people.

In the discussion, J. T. Smith, of New Albany, said this was a question of great importance. How many pupils complete the course in the common schools? Not quite 4 per cent. About 30 per cent. leave at the end of the Third Reader grade. The graduating of the country pupils will be a vast power in keeping them in school.

W. A. Bell said: This is *the important* problem. The majority of children never go beyond the Fourth Reader grade. What are they getting in this and lower grades? Can they spell? Can they read? Can they express their thoughts? The step *out* as well as the step *up* must be kept constantly in mind. J. M. Olcott thinks public sentiment must be captured. Illiteracy is on the increase according to the last census. Enthusiasm will capture the people. Prof. James G. May thinks the heart, above all, must be looked after. Is thine heart right?

At the close of the discussion D. E. Hunter moved that the enrolling fee be 50 cents. Carried.

It was moved by Ira T. Eaton and seconded by W. T. Fry, that book agents be taxed \$1.00. Agreed to.

"WHAT MUST BE DONE WITH THE GROWING HOODLUM ELEMENT?"

was the subject of the next paper read, by James G. May. He said: Hoodlumism is on the increase. It is to be greatly feared. Fourteen per cent. of the convicts of Ohio are high school pupils; 331 came from the colleges. Compulsory education is not the expedient. The patriarchal form is the ideal school. The family is the preparatory school. The companionship of teacher and pupil is not close enough. Power is wanting in all our educational institutions. Our system fails in that it contemplates no home-school, no family training. The parent and teacher are antagonists. The former has no rights which the latter is bound to respect. Tyranny runs through the whole system. Distrust begins with the State Supt. and extends through the whole system, even to the school-room itself. The work of the county superintendent affords no clue to the teaching ability of the applicant. Jasmes A. Garfield, as an examiner, allowed 40 per cent. for "Gumption." "Gumption" in the home circle would operate as a mighty check to the hoodlum spirit. It is wrong to deceive the child in any way, "especially by "stories."

J. M. Olcott moved a vote of thanks to Prof. May for his valuable suggestions. Carried.

D. E. Hunter said: We have a hoodlum element in Indiana. The hoodlum element is not to be attributed to the schools. Facts and figures show that the child is under the control of parents many more hours in the year than under that of the teacher, providing he attends school all the time.

W. A. Bell commended the good points in the paper, but said "The statistics are faulty. If the statistics given be true, then high schools and colleges should be abolished, because they send a larger per cent. to the penitentiary than does the illiterate element. It is wrong to hold the schools responsible, as the hoodlum element seldom or never enter them"

D. M. Geeting thought the press could do much in spreading crime.

Jeffersonville was selected as the place of the next meeting of the association, and the first week in April, 1884, was fixed as the time.

"CULTURE, AND THE INFLUENCES WHICH CAUSE ITS GROWTH,"

was the subject of D. S. Kelley's paper. He spoke of the general qualities of man as distinguished from other animals. Civilization is a natural outgrowth of human nature. The government of the world is accomplished by immutable laws. The law of the human race is growth. The life of the human race is like that of an individual. Beginning at the lowest stages of ignorance and helplessness everything is to be learned. Christianity revolutionized thought and developed science. Thought developed rapidly down to the present time. We now live in an age of great activity, in which the central thought is wealth. This ideal needs revision. The schools are attacked by the fanatics of gain, because they do not fill the boys' pockets with dimes. Is this the ideal of the future? Is wealth the object of life? Knowledge makes life better. This is the future ideal of life. In view of the present and the probable future, what kind of instruction should be given our boys and girls? Can the present condition of society be remedied in our schools? Much can be done by selecting teachers of ability.

In the discussion, W. E. Lugenbeel said culture is what we need. We need courteous men and women. Practical culture is doing the right thing at the right time and place. The training of special schools is necessary. Teachers need to read more. They ought to be systematic in reading. A course of reading should be laid out and followed. Forty minutes each day is sufficient to follow out a systematic and thorough course. The district school teacher needs it most.

Prof. Howard Sandison read his paper on "Principles that Prevail in Methods in U. S. History." The topics discussed are as follows:

1. The Philosophical Element—Its Exclusion.
2. The Method a Double one—(a) The consideration of principles and events by epochs. (b) The consideration of each separate principle with its events throughout the entire course in our nation's history.
3. The Significance of the word "Principle"—A Truth Originating a Line of Reasoning.
4. The Classes of Principles Involved—(a) Those pertaining to the mind as fitted to acquire a knowledge of history. (b) Those pertaining to history in general. (c) Those peculiar to American history.
5. The Statement of the Principles included in these Classes.
6. The General Nature of History—The Biography of a Commonwealth.
7. The Nature of Historical Materials—mainly the Development of the Events of Peace.
8. The Principle involved in the Arrangement of Materials—The Predominant one of an Epoch.
9. The Method—The Double Method in Accordance with the Principles of Association.
10. United States History as an Instrument—(a) Of mental discipline. (b) Of moral discipline.

Prof. A. L. Wyeth then gave a lesson to a class of children illustrative of the principles given by Professor Sandison. He took the knowledge the children already had and associated it with new ideas of like nature. The lesson can not be described. Both paper and lesson elicited the hearty endorsement of every one present.

Col. Owen's paper on "New Harmony in Community Times" was well read by Hamlet Allen. It gave a short biography of the founders of New Harmony. The very methods which are beginning to prevail in the schools of to-day ruled in New Harmony years ago.

A Language Lesson with Class, by Miss Ophelia H. Roddick, was given. Pictures were taken and the class questioned—each member placing his statement on his slate. The lesson was very instructive. G. P. Brown advised all to go and do likewise. The child lives in the objective world. Imagination is active in childhood. The child deals with individuals. W. A. Bell examined the slates and commended the work. The spelling and capitalizing were good.

"The Work of the Primary Teacher," was the subject of a paper by Miss Kate Huron. The work of the teacher pervades all society. The primary teacher stands at the door—is the mirror in which the children see their future selves. Her power is not shown by telling what she knows. Mind grows by contact of spirit with spirit. Time is an element of the mind. The teacher must be full of his subject, ever fresh in his mind. The child must be taught to think for itself. There is a germ in every mind which, developed at the right time in the right way by the right teacher, will make that mind a complete mind. The key to success is to keep the child properly employed. Indolence is the rock that wrecks so many teachers.

H. B. Jacobs thought the primary work the most important. The work must be practical. The pupil must know he is doing right. Quality and not quantity should be the rule.

A. J. Snoke thought the work should not be entrusted to apprentices. The best talent should be obtained and good salaries paid.

Geo. P. Brown said the purpose of education is: 1. To train the will. 2. The forming of the mind by acting and reflecting. 3. Imparting useful information.

A. J. Zeller inquired whether each of the above should be separately applied or all together?

Profs. Smith and May spoke upon the subject. Dr. White said primary teaching is the art of arts, and should be studied well. The ethics of true manhood and true womanhood must ever be kept in view.

At a supplementary lesson in U. S. History, by A. L. Wyeth, the previous lesson was closely reviewed before entering up the new. D. E. Hunter said we must study underlying principles—subjects not books. G. P. Brown called upon Mr. Sandison to restate his paper. After the restatement Mr. Brown said, history is not a description of events, but the biography of a nation. Prof. Sandison's method will revolutionize history. J. M. Olcott related his meeting with Socrates and was reminded that the method was entirely Socratic. Edward Taylor thought this must be the ultimate way of teaching history. It is the teaching of cause and effect.

Experiments in Natural Philosophy, by Prof. McVay, of Ohio. He performs experiments before all classes of pupils. It makes them think. The properties of the air are not well understood unless shown by experiments. The exercise was highly appreciated.

J. W. Porter, of the Hays' Exploring Expedition, talked to the association about his travels—showing how the Esquimaux builds his huts and makes his clothes, boats, and head-wear.

The Committee on Nominations reported the following officers, who were elected:

President—A. M. Sweeney, Supt. Dubois county.

Vice-Presidents—W. W. Fuller, John M. Wallace, Julia R. Hughes, C. F. Coffin, Thos. Bagot, J. L. Shauck.

Executive Committee—D. S. Kelley, chairman, A. J. Snoke, Ella Munson, Lemuel Moss, Geo. P. Brown.

Recording Secretary—Omie Sanford.

Treasurer—C. D. Bogart.

The Committee on Exposition work reported as follows:

Your committee have examined the specimens of work on exhibition from the schools of ten towns and four counties, and find it worthy of high commendation. Assuming that it is representative work

of these schools, and shows what the pupils are able to do by their own effort, it seems to us to merit high praise.

The exhibition of this work seems to us a valuable feature of this association, for the reason that it gives emphasis to the importance of training the children to make an artistic expression of their knowledge. The test which the world applies to knowledge is practical fulfillment. That training in the acquisition of knowledge is best which re-enforces instruction by actual doing. The exhibition of school work here will prompt teachers to give more attention to that phase of instruction which shall give the pupils skill in execution.

We recommend that this feature of the association be continued, and that the executive officers be instructed to publish and distribute to the county superintendent, for distribution to their teachers, early in the school year, instructions and rules for the preparation of papers, etc., for exhibition, which shall tend to secure an honest and correct representation of the pupil's ability to make expression of their knowledge, and that the county superintendent be requested to present this to the teachers of his county at the next county institute.

The committee suggest further, that the thanks of this association should be extended to Prof. D. E. Hunter, for his successful introduction of this exhibition as a feature of the association.

GEO. P. BROWN,	} Committee.
H. B. JACOBS,	
MISS KATE HURON,	

On Thursday night Prof. J. L. Campbell, of Wabash College, gave a very interesting lecture on "The Limestone of Indiana." Every teacher in the state should hear the lecture.

On Friday evening Pres. E. E. White, of Purdue University, gave a lecture on "The Inner Life." No report will do this lecture justice. Dr. White has few equals in the state as a lecturer.

On Saturday about 50 teachers visited the coal mines.

The attendance was about 130.

F. A. FRIEDLEY, *President.*

J. M. DANIELS, *Secretary.*

PERSONAL.

W. T. Field is still at Ridgeville.

Levi G. Saffer is principal of the Selma schools.

Miss Julia R. Hughes is the efficient superintendent of the Bedford schools.

Ex-State Supt. J. M. Bloss's engagement in the State Normal School is for the present term only.

Dr. A. W. Brayton, of the Indianapolis high school, so long on the sick list, is again at his post of duty.

A. C. Crouch, eleven years principal of the Newburg schools, now has charge of the schools at Petersburg.

✓ Prof. W. N. Hailmann, of Detroit, Mich., will conduct a summer Kindergarten institute, beginning July 9th.

Mrs. Hattie E. Tharp, *nee* Swope, of Clayton, has gone to Kansas City, Mo., to do primary work at a salary of \$625.

E. B. Milam, Supt. of Knox county, has decided not to be a candidate for re-election. It will be difficult to find another man as competent to take his place.

G. W. A. Luckey has accepted the position of superintendent of the Decatur public schools, and will not be a candidate for re-election as county superintendent.

— Bryan, a graduate of the State University, who for several years past has had charge of the schools of Graysville, Ill., is now principal of the Vincennes University.

H. S. Tarbell has been re-elected, and so next fall will enter upon his sixth year as Supt. of the Indianapolis schools. He continues to do excellent work, and his salary remains at \$3,000.

J. T. Smith, who has for years been one of the leading teachers of Floyd county, and who was State Supt. Bloss's deputy, now has charge of the normal department of De Pauw College, New Albany.

W. S. Wood has been re-elected Supt. of the Seymour schools for the next school year, at a salary of \$1250. He is finishing his third year, and the action of the board indicates general satisfaction with his work.

William E. Anderson, principal of the Fifth District, has been promoted to the superintendency of the Milwaukee schools, in place of James McAlister, gone to Philadelphia. Mr. Anderson is reported a good school man, and *growing*.

H. M. Lafollette has been appointed Supt. of Boone county *vice* Dr. T. H. Harrison, resigned to accept the presidency of the Board of Control of the State Benevolent Institutions. To accept this place he resigned the principalship of Farmers' Institute, Tippecanoe county.

Prof. H. W. Wiley, of Purdue University, has been appointed chief chemist of the Department of Agriculture at Washington. For the last two years Prof. Wiley has filled the position of State Chemist and brought to the discharge of its duties practical knowledge and

skill which are sufficient proof of his capacity for the duties of the higher official station to which he has been called. The salary is \$2500, and the extra pay is frequently \$1000 more. Prof. Wiley has accepted the place.

W. C. Barnhart, for several years past superintendent of the Columbia City schools, has announced his intention to retire from the place at the end of the present school year. It is to be hoped for the good of the place that a successor can be found who will do as good work as Mr. Barnhart has done.

GEMS OF THOUGHT.

"Heaven's gate is shut to him who comes alone;
Save thou a soul, and it shall save thine own."

[*Edith Holland.*]

It is not what we earn, but what we save, that makes us rich. It is not what we eat, but what we digest, that makes us strong. It is not what we read, but what we remember, that makes us learned. It is not what we intend, but what we do, that makes us useful. It is not a few faint wishes, but a life-long struggle, that makes us valiant.
—*Anon.*

No State is great until its educational facilities are great.—*Gov. Crittenden.*

Parsimony toward education is liberality toward crime.—*Id.*

The teacher is like the candle which lights others in consuming itself.—*Ruffini.*

Delightful task! to rear the tender thought,
To teach the young idea how to shoot.

[*Thomson's "Spring."*]

To sentence a man of true genius to the drudgery of school is to put a race-horse in a mill.—*Colton.*

Taught or untaught the dunce is still the same;
Yet still the wretched master bears the blame —*Dryden.*

Uneasy lie the heads of all who rule;
The most so his whose kingdom is a school.—*O. W. Holmes.*

I can easier teach twenty what were good to be done than be one of the twenty to follow my own teaching.—*Shakespeare.*

One of the illusions is that the present hour is not the decisive hour. Write it on your heart that every day is the best day of the year.—*Emerson.*

POPULAR SCIENCE.

This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

The *Pall Mall Gazette* says that by the death of Darwin, England "has lost a man whose name is a glory to his country—one who belongs to that illustrious band of whom the Greek statesman said that 'the whole world is their tomb.'" The press of Germany is lavish in the tributes to the memory of the great naturalist.

SPONTANEOUS COMBUSTION AND ANIMAL HEAT.

There is no proof of the so-called cases of spontaneous combustion in living animal bodies. The highest natural heat in the living state yet noticed is 111° in the swallow. Mammals range from 97 to 104° . The heat of sheep is 104 ; of the pig 106 ; of the Arctic fox 107 , with the air at 14 . Birds and mammals are warm-blooded;—that is of constant temperature. Fishes, reptiles, and invertebrates are cold-blooded—that is, their temperature varies with the surroundings. The tissues of man vary from 98 to 100 ; the blood from 100 to 102 . The hottest blood is that coming from the liver. The surface is colder than the interior. The hands and feet are usually several degrees colder than the trunk. The thermometer may mark 98 under the tongue and 102 in the bladder. The influence of race is ineffective. Climate and seasons cause less than a degree difference. Sleep lowers the temperature one or even ten degrees. Quick running raises the general heat about two degrees. Fasting reduces and feasting increases the heat. Chaubert, the "fire king," went into ovens from 400 to 600 degrees for a short time—twice the heat of boiling water. In the Arctic regions Kane withstood a cold of 55 to 70 below zero, the latter being 170 below blood heat. In Peking in July, 1743, 11,400 people died in ten days from sunstroke. The heat was 104 in the shade. The heat of animals is mainly due to the oxidation of carbon in the tissue and blood. Age, sex, season, climate, food, clothing, shelter, exercise, and mental state all affect the temperature of animals.

ART EDUCATION IN FRENCH PUBLIC SCHOOLS.

The French Minister of Instruction has appointed a committee to investigate the following questions: 1. The decoration of school-rooms by means of pictures, paintings, charts, and designs. 2. The formation of small art collections to be placed in the museums of the schools. 3. The selection of a series of engravings to be given as rewards to the pupils. The object of the last is "to drive from the schools the gaudy rewards now given, and to substitute for them something which, carefully preserved in the family, will introduce into the humblest homes a reflection of the great art museums."

BOOK TABLE.

After Supper, a home and school paper edited by M. L. Rinehart, of Indianapolis, improves with each issue.

Our Little Men and Women, by D. Lothrop & Co., of Boston, is a beautiful child's paper. It is a work of art.

The Telephone, a magazine which has nothing whatever to do with the telephone, but is devoted to general literature, has at the end of its first year wisely concluded to change its name; so hereafter it will be known as "The Midland Monthly." Frank H. Smith, Indianapolis, is publisher, and W. de M. Hooper, late superintendent of the Rensselaer schools, is managing editor.

The following books have been received and will be noticed next month:

School Physiology, by Dunglison, Porter & Coates, publishers.

Hooker's First Book in Physiology, Sheldon & Co., publishers.

New Eclectic Speller, and *Gregory's Political Economy*, Van Antwerp, Bragg & Co.

Anderson's Junior Class History, Clark & Maynard.

Supplee's Hand-Book of Civil Government, Eldridge & Bro.

BUSINESS NOTICES.

If you wish to raise a club for the Journal, write for terms to agents.

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CHAUTAUQUA, 1883.—“The Chautauqua School of Languages,” and “The Chautauqua Teachers' Retreat” for 1883 will open at Chautauqua, N.Y., on SUNDAY, July 14. The “School of Languages” will continue six weeks; the “Retreat” three weeks. German, French, Greek, Latin, Hebrew, Anglo-Saxon, English, English Literature, Physical Science, Elocution, Kindergarten, Pedagogy, Clay Modeling, The Scientific Kitchen, Drawing, Music, Teachers' Conferences, Debates, Spelling Matches, Museum, Receptions, Excursions on the Lake, etc.

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For circulars address

REV. W. D. BRIDGE, New Haven, Conn. 5-11

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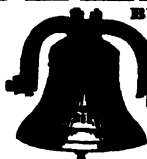
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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

JUNE, 1883.

No. 6.

THE IMAGINATION.

[An address delivered before the State Teachers' Association by H. S. Tarbell, Supt. Indianapolis Public Schools. Concluded from May Journal.]

I HAVE referred to Jesus Christ, speaking of him as a man, as a being of profound and imaginative mind. Let us test our imaginations by transporting ourselves to distant Galilee and backward through eighteen centuries of time. Jesus has sent out his disciples two by two throughout Galilee to preach his gospel, while he awaited their return. At length they reassemble at a mountain beforehand appointed to them, and rehearse to their Master what they had said and what they had done.

First to give their report were those ready ones whose minds dwelt largely in their senses, and whose thoughts needed no elaboration.

The incidents of their journey were narrated. How this person and that had received their message; and with wearisome detail of non-essentials they described the events through which they had passed. Then came the reports from those of broader and deeper thoughts, those who grouped men in classes and discerned how the characteristics and circumstances of those whom they addressed determined the reception of the gospel they bore.

At length, embodying, beautifully, and explaining all, the Master speaks: "Behold a sower went out to sow; and when

he sowed, some seeds fell by the wayside, and the fowls came and devoured them up."

I need not repeat the familiar parable. See you not here the profound discernment, the broad generalization, and over all the clear imagination, giving vividness and beauty? And see you not the intellectual secret of giving clearness to depth?

Talmage is a master of imaginative speech. It is this, rather than his grotesque extravagance, which reaches the popular heart. Notice this from a recent sermon: "What if a man should have so many questions to ask about light and heat that he should sit in a dark room all his life instead of going out to see the one and feel the other? But there are men in such undecidedness about the chemistry of the gospel that year after year they shut themselves in the dungeon of their unbelief when God has all the time been calling them to come out into the noontide light and warmth of the sun of righteousness."

When Bismarck said, "The cause of Germany is to be won by blood and iron, and not by parliamentary speeches," it was by the heat of imagination that these thunderbolts of words were forged.

Says Addison in the *Spectator*, "Imagination sets off all writing in general, but is the very life and brightest perfection of poetry, where it shines in an eminent degree; and where all other beauties are present the work appears dry and insipid if this single one be wanting. It has something in it like creation. It makes additions to nature and gives greater variety to God's works. In a word, it is able to beautify and adorn the most illustrious scenes in the universe, or to fill with more glorious shows and apparitions than can be found in any part of it."

Such a faculty must be of importance to the teacher. Upon the imagination depends the value of all apparatus for visualization. Globes, maps, diagrams, depend for their value almost wholly upon the imagination, which seizes these staves and helps on the tottering mind. Without imagination how is the tired teacher to regard every urchin as an unfledged angel, and so fulfill parental requirements?

Every inspiring teacher is a person of strong imagination. It

is this which gives influence and impresses personality. Personal magnetism has for its chief intellectual attribute a vivid imagination. The great secret of success in instruction is to be able to think the pupil's thoughts, to put yourself in his place and work from his stand-point. The action of the mind in gaining knowledge differs much from its action when communicating. It is imagination which gives the power thus to go to the standpoint of another and work from his base.

But if imagination in the teacher is important, it is equally so in the pupil. We trudge for years wearily along the side of fields across which our pupils would fly had they the wings of imagination.

Says Bain in "Education as a Science": "If the early training could be so directed as to enrich and invigorate the conceptive faculty [his term for imagination] a time would come when definite knowledge could be absorbed so rapidly as to dispense with the attempts to impart it prematurely."

The one great method of training human faculties is that of "trial and test." As the eye is trained to judge of distance by estimating a certain length to be a foot or a yard, and then correcting the estimate by the measuring rod, so any faculty may be trained. By exercising the imagination, and testing its creations by the standards of good taste it becomes steadily stronger and truer. It is one of the chief duties of a teacher to furnish such standards for the improvement of the powers of the child. When the pupil arrives at the ability intelligently to criticise himself, or to compare his productions with readily accessible standards, he has reached the point of independent study and self-culture.

Some exercises suitable to the culture of the imagination may be mentioned:

Abstract truths, such as benevolence and kindness, may be put into concrete form by the pupils' giving scenes, circumstances or persons that illustrate or call forth these feelings. We try to teach morals, but what to a child are morals in the abstract? Even for us larger children, the imagination must clothe them in attractive habiliments and bring them in lovely forms to our arms before we can embrace them.

At the end of the lesson in reading or geography let the pupils recall and describe the mental pictures they have formed from the scenes studied. *Insist on this mental picturing always.* In geography the first lessons should be of home scenes and those elements of home surroundings which expanded and intensified by the imagination will give a comprehension of all the world. The climate, the productions, the people and their costumes and customs should be so pictured to the child that he may have a clear and life-like image of each. This should be done before a study of the map is made. The power of a child to expand a colored bit of paper into a country is so small and the image of the land so quickly shrinks back to the dimensions of the map that the attempt to fill these spots of earth with people, rivers and commerce is a failure. While, if the Arabs, for instance, in their dress and habitation, with their horses and camels, their caravans and tents, their mountains and deserts, their palms, dates and coffee, their marts of trade and shipping at the wharves, had preceded the map study and made a mental demand for room and habitation, then the map would prove serviceable to locate the land of the Arab and show its distance and direction from other countries. The image of Arabia thus formed could never shrink to a bit of colored paper.

This conception of a proper method requires observation, pictures, conversation and reading to precede the formal study of geography, which proceeds from the map to the descriptive text and not the reverse. This means a delay in taking up the formal text-book in geography and the introduction of geographical reading matter preceding. It means likewise a culture of the constructive imagination. What is geography to the imaginative youth? The towering mountain, the foaming river, the busy city, are just the same to him whether he finds them as descriptive terms in his geography or phrases in his grammar to be parsed.

Music as an art can give play to the feelings and to the imagination. Much of the beauty and utility of song lies in the emotion which we associate with it, and the teacher may do much to cherish high sentiments by securing from his pupils thought

upon the scenes and characters to which the songs sung are appropriate. Does the air of the song remind the pupils of any places or states of mind? What are they? Let them be described in some detail. This turns the imagination into a new field, almost a new country of flowers and meadows, of woods, thickets, rivers, ravines and mountains. Here may be heard the pattering rain, the rattling thunder, while anon, gleams the sunshine. Here is man in all his moods. Here are some of the dark recesses of the human heart to be lighted up by imagination when music opens the portals.

Biography furnishes excellent material for the action of the imagination, and is of the highest educational value. It is not enough in the study of history to give pleasing pictures for the mind's delight; but the imagination should be required to set before the mind in panoramic form the whole procession of events.

It is very important to give children the power of foresight, the ability to anticipate and realize the future. Very much of moral training lies infolded in this thought. Ask pupils what such a man will do. What will such a course lead to? What will happen to-morrow? next week? What will be needed in such a case? It is an excellent practice to change plain language to figurative, or to change one figure to another, and observe the effect. Seek the full significance of the all tropes. All these words embody a thing of sense and an idea of the mind. We know our friends after the flesh and after the spirit. Let words be friends to us, in which new graces of form and new qualities of spirit shall continually appear, and while thus seeing the soul within the body, and observing how each beautiful feature of the one reveals some grace of the other, do not forget to distinguish soul from body, and know the limits and beauty of each.

Study poetic authors, and dwell upon the figures they employ, amplify them, criticise them, and enjoy them. Quintilian has adorned his treatise on rhetoric with abundant metaphors which will repay study.

Teachers need more than others such study. It is the imagination that gives spring and vivacity to the mind. But the dull

pressure of the daily burden takes all the elasticity from us. Who gets dull and prosaic so soon as the teacher? To whom do we oftener hear applied the epithet, dried up, hum-drum? What speaker is quite so dull as an old teacher?

The secret of eternal youth lies in keeping the imagination fresh and active. And in no way can we do this but by exercising it upon the imaginative products of others or in creations of our own. Sir Joshua Reynolds says in one of his discourses: "It is by being conversant with the inventions of others that we learn to invent, as by reading the thoughts of others that we learn to think."

To enjoy best the beauties of a sunset, a painting, or a poem, we must not curb our fancy by the fetters of criticism. It is what *we* think or feel that gives us most satisfaction, and the best relish is obtained from those objects which excite in us pleasurable activities. There is, therefore, a criticism which has its basis in the general impression by an object, and a more minute criticism which is concerned with structure and detail. The former must precede the latter, or its opportunity is gone forever.

The enquirer after new truth stands on the boundary of the known and peers into the unknown. His senses are alert, his memory retentive, his reason strong to prove the truth or falsity of every proposition presented; but if no propositions are presented his reason has nothing to operate upon. Imagination is the great asker of questions for the other powers to answer.

The development of this suggestive power in the mind of the child will furnish it the means of mental movement its life long.

A REMARKABLE case of precocity was that of Sir William Hamiton, the English philosopher. In his third year he read English admirably, and had overcome many of the obstacles of arithmetic; in his fourth year he took high rank in geography; in his fifth year he could translate Hebrew, Greek, and Latin, and recite from Homer, Milton, Dryden, and Collins. His eighth year found him able to converse in Latin, French, and Italian, and his tenth year saw him a student of Arabic and Sanskrit.

THE ELEMENTS OF GOVERNING POWER.

BY E. E. SMITH. ✓

THE VINE AND ITS BRANCHES.

5. *Sunlight Develops Vine and Branches—Keen Observation Opens up the Way to Success.*—Sunlight strengthens the vigorous branches, awakening cell-life and promoting cell-development. It also hunts out the weak and less favorably situated buds and stems, as well as the diseased and decaying ones, toning up and encouraging the growth of the one and possibly retarding or destroying the injurious effects of the other. In a similar manner the keen, quick, intelligent observation of the teacher affects the development—the unfolding—the education of his pupils. His sharp eyes should see all that goes on in the school-room, upon the grounds and street, yes, and may even look into the homes from which the pupils come, for here are oftentimes sources of most malignant epidemics. If any mischief-making is going on, or if there are complaints of injustice or inattention on his part, his ears should hear them that he may wisely shape circumstances so as to bring good instead of evil out of both. The pupils should *feel* that the teacher keeps the run of events, and yet should not look upon him as a spy, or an eavesdropper, or upon themselves as being distrusted and watched.

To the accomplishment of these ends, it is all important that the teacher possess a very large fund of tact,—skillful policy,—the happy knack of steering with bold hand even into unknown waters, and yet avoiding snags and sand-bars. He must judge quickly of the depth of the water and of the presence of hidden reefs by the appearance of the surface. For these purposes, he must keep his mind vigorous and flexible, sharply discriminating and yet considerate, and must so study human nature as to form a quick and accurate perception of character. As another has well said, “He must unite with a masterly knowledge of ways and means the greatest of skill in their application.” Thus the external and internal mechanism of the school becomes a harmonious whole through the greatest of all arts—the concealment of art.

But the in-penetrating sunshine does more than strengthen the weak branches and develop the uncomely ones more into a condition of symmetry. It hunts out and exposes to view diseased spots and abnormal growths which are to be healed or removed. And thus the close scrutiny of the teacher will give him a ready perception of defects. These are to be looked for—

(a) In himself. "Know thyself," was regarded as the wisest advice he could give by one of the great philosophers of Greece. And we can give no better. A man who is to guide others should study himself well, should have a realizing sense of his weaknesses and his temptations, that he may judge others mercifully and have perfect control of his emotions and his resources.

(b) The teacher should farther guard against errors *in his system* of work and of instruction. This of course requires some knowledge of the science of education and of the ends to be accomplished by education. All theories, technicalities and lofty imaginings must give way before that plan of laboring which most readily and successfully accomplishes the work for which the public school system was founded, and in which it must result—or perish. It does not matter very much whether the teacher is "unconsciously" scientific or "spontaneously" scientific, (with all due respect to our doctors), so he systematically, rapidly and thoroughly does the work for the young which the utilitarian spirit of the age demands.

(c) The teacher may next look for defects *in his methods*. His system may be all right and his method of execution abominable, nay more, it may be absolutely vicious. A man may be wise in his knowledge of principles and poor in their practical application; he may be very skillful in methods and expedients and yet unable to formulate his work into a scientific scheme. The writer unhesitatingly expresses his belief that the probabilities of success are with the latter rather than with the former. The points of a lesson may be fixed and bristling in the teacher's mind, but they have not done their work until they have been developed through the pupil. To the study of objects and principles as presented by others and by his own experience, the

teacher must add additional plans for applying the material studied to the individual studied.

(d) Finally, the teacher may look for defects in his pupils. The weak points in their characters, the unfavorable surroundings at their homes, their condition as to preparation for the work to be done, their most pressing needs, their dispositions and habits, should all be known and carefully considered, both in preparing them for their work and their work for them.

Thus sharp conflicts are avoided, the thoughts of the pupils are turned into channels of usefulness, their energies are spent in securing their own growth, the order and system of the preparation for the recitation seem so natural that they fall right into it, and there is only in emergencies even the recognition of the presence of a governing power. Pupils kept busy with their work, except in a "nervous epidemic," are never disorderly pupils. And diversion is a sure cure for the "nervous epidemic."

6. *Nourishment Sent to Branches—Power to Enthuse Pupils.—*

If the vine be in a normal, healthy condition, the nutriment that flows to each branch will gradually awaken it to life and activity internally, supply its demands, and then impart the outward tendency toward the production of leaves and of fruit. Thus the spirit of the well-fitted, earnest and devoted teacher will first inspire the pupil with an ardor for and a love of learning for its own sake, and then give it an inclination toward the gain of practical knowledge for the purpose of doing good to others. To do this, each favorable opportunity for inculcating a knowledge of and a desire for the good, the beautiful, and the true, should be eagerly embraced. A gentleman gives a lecture that pleases and instructs the community, furnishing much food for thought and for conversation: let it be seen by *accidental* observation that his power came through faithful application to the work in hand. An engineer plans a great bridge, an architect designs a public building of magnificent proportions, a landscape gardener lays out a beautiful park, a mason builds a symmetrical and true arch: let a description of some of the chief and most interesting features be given, and such just praise bestowed upon

the originator of the work as will create a desire to prepare one's self *to do equally as well*. A generous deed is done by a pupil, a valuable suggestion made, work out of the ordinary line is done, some one's life has been made happier by an act of thoughtful kindness: let recognition be promptly and discreetly made of these things in such a way as will justly reward for the good done and stimulate toward growth in that direction, without awakening false pride or the base spirit of envy.

By such means the fact will be kept before the mind of the pupil that the school is a means, not an end; a preparation for life-work, not a doing of that work; a formation of such elements of manhood or womanhood as will be useful or injurious in the battle of life where the "survival of the fittest" is the rule, not the exception. Thus a stimulus is afforded that will help each to whip up his flagging energies until law has become a part of his nature and order a habit rather than a task or requirement.

In all his work, the teacher should aim to avoid offenses by substituting industry, opening up ways in which nervous activity may be expended for good, and keeping out evil in the school as an organized mass by leaving no room for it in the individual life of each pupil.

Now all these things must cost labor and study; anxious thoughts and aching brains; at times hours of despondency and hopelessness; failures and disappointments in many cases; and the sharp pangs that come from ingratitude or misrepresentation.

But there is a recompense after all. The rich fruitage of the branches is their usefulness in the world. Their leaves protecting the old vine from excessive sunshine and storm are their expressions of gratitude. The larger growth that comes is the broadening of their influence for good. And beneath the shade of such a vine and its branches there will ever be security and peace.

7. *The Vine is not Entirely Self-Supporting—The Teacher is not Sufficient in Himself.*—There are two sources from which he must receive help: From his fellow-laborers who are treading the wine-press and bearing the heat and burden of the day with

him; and from God, the giver of every good and perfect gift, and whose loving Fatherly heart is as tenderly compassionate toward the weak who seek light and strength as on that morning when the angel proclaimed joy to the world and peace among men.

"Honest love, honest sorrow,
Honest work for the day, honest hope for the morrow,
Are these worth nothing more than the head they make weary,
The heart they have saddened, the life they leave dreary?
Hush! the sevenfold heavens to the voice of the Spirit
Echo: He that overcometh shall all things inherit."

PURDUE UNIVERSITY, May, '83.

EVIL OF ILLITERACY.

BY REV. JOSEPH COOK.

Of the ten million of voters in the United States, one in five can not write his name. The nation is now charged with the education of 18,000,000 of children and youth. Of these 10,500,000 are enrolled in public and private schools, but the average attendance is only 6,000,000; 7,500,000, or five-twelfths of the whole, are growing up in absolute ignorance of the English alphabet. At the present rate of the increase of the number of children not attending school, there will be in ten years more children in the United States out of schools than in them. In all but five of the States there were enough illiterate voters to have reversed the result of the last presidential election in each of these States. Thirty-two and three-tenths per cent. of the voters in the South are illiterate. Of these, 69.7 are colored, and 30.3 are whites. In spite of all the appliances of education, the increase of illiterate voters in the South from 1870 to 1880 was 187,671. "In more than one-third of the Union the ignorant voters are almost one-third of the total number of voters." (President Hayes' address at Cleveland, October, 1882.)

While illiteracy, either as a haze or a dark threat, occupies so much of our national sky, what is to happen if the opinions of His Excellency, the present Governor of Massachusetts, prevail concerning the withdrawal of State aid from normal schools, or

the reduction of the salaries of male teachers in the common schools? Is Butlerism the Ariel to control the Caliban of the ignorant suffrage of the United States? My conviction is that national illiteracy and Butlerism stand to each other in the relations of fire and fan. I affirm that Butlerism and national illiteracy put together would ruin the nation.

One of the hugest needs of this country, and of many another country, is a middle link of education between the best cultured and those who have only elementary instruction. The masses of our people very soon will cease to believe in highly-intellectual and thoroughly-trained men as leaders, unless there be high schools to lift pupils from the very bottom of the social scale, and educate the brightest minds into contact with the best-educated circles.

In the name of political necessity, and of the interests of all classes of people, I defend the high schools and the normal schools. I defend that continuity of educational institutions which begins by the lowest round of the educational ladder, a round that ought to stand in the gutter, and lifts the worthy pupil of whatever social rank to the upper round, on a level as high as education has reached anywhere on earth.

National aid to education is the only adequate remedy for the national evil of illiteracy. I have come recently from distant lands, and I have found that many a country on earth is much more sensitive to its illiteracy than we appear to be to that of our own nation. At this moment Greece expends more for her common schools, in proportion to her wealth, than we do. So does Japan, and the latter country has a larger proportion of children in school than we have. As a nation, we are not in advance of Prussia in expenditures for common schools, and even England and Scotland are verging close upon New England in their taxes for the abolition of illiteracy. The truth is that, instead of being, as a whole, at the front of the educational advance of civilization, our proud nation is gradually dropping into a laggard place.

This national aid is a majestic scheme. It appears to me to be one of the greatest enterprises lately proposed in our nation. We of the old thirteen colonies have not had as much aid as we have given, and under these new measures we should get some

ain—and we need it, especially where the great cities are thrusting their illiteracy into such alarming prominence. It is only fair that in any new aid the old thirteen States should have assistance according to the extent of their illiteracy.

My supreme argument in favor of this majestic scheme of national aid to education is the condition of the South. It was the North that forced upon the South a large illiterate vote. This was a noble act, as I regard it. It was justified by the circumstances of the time. But the war itself is not fought out until we enable the Southern States to conquer the perils of the illiteracy which came into existence there by the downfall of slavery, and by the enfranchisement of the blacks. Aristotle said that whoever meditates on the art of governing will perceive that it depends on the education of the children. Let us deliver America from bondage to the uneducated; let us end the war, let us have peace,—but not through Butlerism.

CITY METHODS OF TEACHING VS. COUNTRY METHODS.



BY D. M. GEETING, SUPT. DAVIESS COUNTY.

WITHOUT any investigation there may seem to be a difference in methods of teaching in our city and country schools—an essential difference too. That we see different methods employed is true, but that fault lies in the precedent which we have so long unconsciously followed. This doctrine of a difference of methods has been taught from the beginning of our public school system, and it has been carried so far as to alienate these two classes of teachers—one term used by way of reproach, the other a term of bigotry.

A man who now advocates the old statement, "That will do very well in the city, but not in the country," may be put down as being pretty well fossilized.

The recent lectures and papers on pedagogy, treating it as a science, has done much to mould public opinion, and place teaching before the world as a profession. Then admitting that teaching is a profession it can not be a dual one—city and

country. It is but one, and though possessed of many branches, all are traceable to the one great foundation of this profession—METHODS.

It may be well to notice some of the evils growing out of a misunderstanding of this question :

1. As an essential for a successful teacher in the country school, the people look for *ability to control* a school. It does not matter in what manner the death-like stillness is kept; he is eulogized, yet his *school* may be a *prison*.

2. There must be knowledge, and the very fact that a teacher *possesses* it, is evidence that he can teach. More errors in the teaching of country schools have grown out of these two things than all other causes. Methods are either entirely overlooked or made of minor importance, and it is to be regretted that so many teachers in our district schools have overlooked the importance of a knowledge of the best methods, which are essential to success in school. A teacher should mould public opinion, but in this instance many have failed to do it, and in the isolated districts of our country, no improvement has been made in the schools, hence no improvement in the methods has been noticed. Nothing expected and nothing done.

Where teachers receive professional training I know of no instance where a training school has a special course for the teachers of either city or country schools. Methods of teaching are founded upon some principle of education and deal with the child-nature without regard to the residence of the child. How foolish it would seem for a teacher to prepare himself for his work by ascertaining first *where* he would teach instead of *what* he would teach—what teacher knows this year where he will be next? In the city schools we have personal supervision by men competent to do the work, and as a result we find here the *best* methods. It is not because they belong here any more than to the country that they are found, but that public opinion has seen the results of a "methodical way of teaching." They have been tried, and successfully too, and have proved to be useful in developing child-nature.

You may have observed that a few years' experience in a city graded school makes the *best* training for the work of the country school, and all on account of *methods* pursued in the country

school being identical with those followed in the city school. As an example of method let us take Grube's method in arithmetic. That has been successfully tried everywhere, and if it be especially adapted to any school more than another, the author is certainly disappointed. As a child in the country is taught to concentrate his mind upon *work* more than the child in the city, that much is in favor of any method in the country over that in the city, and in the same proportion will the child from the country grasp the facts and the plan quicker than the one from the city. Take the method of teaching the alphabet in the country, which became so firmly stereotyped that it is hardly dislodged in the minds of some teachers at this time, and we find at one time two separate and distinct methods followed—in the city the word or object method, in the country the letter method; but now I may say the object method is universal, and why? because this "city" method worked well in the country—*they all do*. In city schools a teacher's work is based upon methods, and much attention is paid to them by the superintendent to see how methods and results compare, and out of these grow the frequent or unfrequent grade-meeting. Teaching in the country is under altogether different circumstances as regards supervision, and if a teacher be inclined to avoid method in his work there is no power to reach him immediately to correct him. To him, teaching is a drudgery, to wear away day after day, and if he hear a few meaningless *rules*, or a parrot-like lesson, which he calls a recitation, he is satisfied to do so little; the children glad to do no more.

Would this be so were live methods introduced by a live teacher who knew and mastered them? *A good method in the city becomes a better one in the country*, and the great demand of country schools to-day is, teachers who have studied and understand the best methods. Methods are to teaching what machinery is to manufacturing. The best methods are demanded in the country for the following reasons:

1. The surroundings incline to draw pupils out of the school, hence the necessity of making them attractive.
2. The school-term is correspondingly shorter than in the city, hence the instruction should appeal to the child's understanding, so if he should learn but little, that little he should know *well*.

Methods in all grades of district schools will correspond closely with those in graded schools in towns and cities. We need in grammar more language or *expression*, and fewer rules of false syntax. In geography more useful and comprehensive commercial matter, and not so much "bounding." In arithmetic more rapid and accurate addition, if you please, and none of the set rules. In reading more interpretation of the thought, and but little of the word-calling. In spelling an ability to write a word correctly as well as call whole pages from memory, to be used in "showing off" classes. Methods to reform these abuses in city schools will reach the same in country schools.

The results of the educational advancement of a state are measured by its district schools; they should therefore receive into their workings, teachers who can teach sound sense, judgment and knowledge by example, rather than those who teach book-learning" by promising rewards. Whoever approaches childhood in a teachable spirit, honestly strives to find out child-nature, and by careful observation as to the capacity of the little one, is the teacher who fulfills the requirements of our common schools, and who will never want for methods.

To destroy our public school system or change it to an instrument to turn out inferior men and women, would work an inconceivable injury to the country. To do this we have only to hold out the idea that country schools do not require so much as those of the city, and we have thrown upon us the inferior men and women, and through this channel the overthrow of the system of public schools can be accomplished.

When leaving school our pupils should have learned the elements of a few essential branches of knowledge, a somewhat mental training, a taste for reading, and an aptitude of thought.

Peztalozzi's system of education is included in the one word *development*, and every teacher should study that word as it applies to his work, and he would then see that *memorizing* is the greatest extreme from the point—development.

Proceed from the *known* to the *unknown*, adapt the instruction to the grade and age of the pupils, and whether your work be cast with that of the "city" teacher or among the "country" teachers, one thing is sure, your *methods need not be changed to suit the locality*.

DEPARTMENT OF PEDAGOGY.

This Department is conducted by GEO. P. BROWN, President State Normal School.

DISCIPLINE OR TRAINING.

✓
THESE words are of common use, but convey a very indefinite meaning to most teachers. Discipline is a vague something thought to result from study, which it is valuable to possess. And it is thought, too, that any and all kinds of study give discipline. Discipline and knowledge are very different acquisitions. Either *may* result from study, but not necessarily both;—and not necessarily either. In this discussion I shall use the words *discipline* and *training* as expressing the same meaning. There is a meaning expressed by training which is in no proper sense education;—as when it is applied to the training of a horse. Education must result from *self-directed* activity. When it simply produces hands for another's thought it is not education, but training in this lower meaning of the word. We will try to come up to the meaning of discipline by the following approaches:

The true purpose of all intellectual education must be to fit the mind to discover truth. The ability to make such discovery is what distinguishes the educated from the uneducated. There are many so-called educated people who have no education, and some of them are without the natural endowments that make it possible for them to become educated. They have memory but no power of thought, a powerful imagination but no judgment, good discrimination, perhaps, but no power to generalize. Such persons can acquire a mass of facts commonly called knowledge, but are without power to make any use of them for the discovery of new truth. They become lost in the trackless forest of borrowed ideas, and their so-called education is a stumbling block in the way of any usefulness of which they might be capable without it. I do not say that by proper treatment many of these persons would not have become in a sense educated and somewhat useful, but the treatment they have received has only increased the mental deformity with which they were born.

It is the function of education, discipline, or training, to cause such an exercise of mind as shall develop the power to make a proper use of knowledge in new and useful constructions. Every kind of problem that man is called upon to solve, has something new in it. Either there is one or more new elements, or these elements are of a different quality, quantity, or degree of intensity, and these concurrent elements must be so marshalled that the new whole resulting shall be true. To be able to discover and thus marshal these elements is the result of education,—is the product of discipline. It is not he that *knows* the world only, but he that can *use* the world that is educated.

What are disciplinary studies?

Those that furnish the ideas, forms and methods that enter into the mechanism of reasoning. Prominent among these are mathematics.

The only justification for the amount of time devoted to the study of mathematics *by all* who attend school, is its disciplinary value. There are a few specialists, who would find a sufficient reason in the *knowledge* obtained by the study. But as regards the great mass, the ability to solve mathematical problems would, alone, be a poor return for the outlay of time and energy expended in this study.

It trains the student to look well to his premises. These in mathematics are intuitions of the reason, universally and necessarily true. Their truth is therefore self-evident. It requires the explicit statement of all first principles, and rigid definitions of all leading terms and ideas. Its progress in reasoning is onward from self-evident truth by successive deductions to the truth sought, each step in the process resting upon ground as firm as the primary axiom. It admits of no begging of either premises or conclusions, and of no stealthy admissions that would come into the reasoning without proving their right to be there. It will not permit any shifting of ground, but compels the reasoner to accept the conclusions which follow from the ground first taken. It permits no double meaning of terms. It inculcates the student into a scientific method of dealing with con-

current elements where one or more of them are variable; and thus leads to the threshold of probable reasoning. It is in pursuing the mathematical method of dealing with such elements in the more complicated operations of nature and of man, that the difference between the educated and the uneducated intellect is made apparent.

It is all important that the teacher have a conscious knowledge of these elements of value, and that his methods of teaching be constructed in the light of them.

In a future number we will continue the discussion of the disciplinary value of other studies.

WHAT IS A NORMAL SCHOOL?

THERE are so many normal schools in the state, actual and prospective, that one would seem to betray gross ignorance of educational matters who should ask "what is a normal school"? The original signification of the word *normal* would seem to imply that this school is a typical school, one that might serve as a *pattern*, "a school where methods of instruction serve as models for imitation." This would be a true description of any well conducted school. Every well taught primary, grammar or high school, or academy, or college is, in this sense, a normal school.

But this is not the meaning which is current among the people.

The word "normal," when used to characterize a school, is thought by the public to have a technical meaning. They understand a normal school to be a school the commanding purpose of which is to give instruction in the science and art of school teaching. Its function is to teach the principles and practice of a special vocation. The matter and the method of its instruction must be such as constitute the most direct approaches to this end.

It is true that any good school, in which good methods prevail is, in one sense, a preparatory school for teachers. In a similar sense is it a preparatory school for farmers or merchants

or physicians. There is this difference, however, that the subjects taught to the student in the school are the same as this student will be required to teach when he assumes the duties of teacher, and that the methods employed in teaching him will be proper methods for him to employ in teaching others. There is therefore ground for saying that attendance at a good school gives a preparation for teaching. But such schools are not normal schools.

The commanding purpose of a normal school, as we have already said, is to teach the science and the art of school teaching. Its commanding purpose is not to teach the different branches of knowledge.

Any intelligent person will be able to determine for himself whether a school claiming to be a normal school is really such, by applying certain tests. He will first look at the facilities provided for practice in the art of teaching. No one can learn to teach by listening to talks *about teaching*. As readily could he learn to write by listening to lectures from a writing master. An essential part of every normal school is a system of schools for observation and practice consisting of schools of every grade, from the lowest primary to the high school. This is an essential condition of any training in the art of teaching. Without schools for observation and practice it is impossible for the student to obtain any correct and adequate idea of the *theory of teaching*, which it is the function of the other departments of the school to unfold. In the second place, the investigator will study to learn whether in the theory department the study of the different branches of knowledge *for the sake of the information thus gained* is made the most prominent feature of the instruction. When knowledge of the subjects and mental discipline resulting from its acquisition are made the chief end of the instruction, the school is in no proper sense a normal school. Every subject studied must be pursued primarily and chiefly for the light that will thereby be thrown upon the science of teaching that and every other subject. By the study of the different subjects in the course from this stand-point much useful information will

be acquired, but that is incidental to the main purpose of the study.

The investigator will next proceed to inquire as to the relative amount of time devoted to the study of the different branches of learning, compared with the strictly professional subjects. If he finds the time to be employed in recitations in subjects that "will help the student to get a better certificate," to the exclusion of daily observation or practice in the training schools, the school is in no proper sense a normal school. The purpose for which the student needs to study is to do better teaching, not to get a better certificate. If he does his work well in the normal school it will follow that he will be able to get a better certificate; but that is an incidental result,—not the direct one. When the time comes that licenses to teach are granted primarily because of the applicant's ability to "*teach and govern a school*," rather than because of his ability to answer a few questions in arithmetic, grammar, etc., then will it be a more fitting thing for the normal student to attend school for the purpose of improving his certificate.

The law of the state contemplates that the examination shall test the applicant's ability to *teach* the eight branches, but our examiners in too many cases are satisfied if the applicant merely *knows* these branches. The normal school finds the only reason for its existence as a normal school in the necessity which the state realizes for teachers that know how to *teach and govern*. The mere knowledge of the branches is what every intelligent man and woman in the community possesses in common with the teacher. That which makes one a teacher rather than another is his knowledge of *how to teach*.

We have tried to indicate some of the chief characteristics which a normal school possesses. So long as students continue to be received in these schools who are ignorant of the common branches of learning, provision will have to be made for their instruction in these. But we have now reached that stage of educational growth when the giving of such instruction should not be regarded as the main purpose of these schools.

HISTORY.

MUCH of the matter usually presented in our text-books on United States history is comparatively unimportant. Perhaps no other subject in the common school course of instruction requires so constant a discrimination between the essential and the non-essential. The principles of selection must be applied by the teacher at every stage of the work and to every portion of the subject-matter. With a class of given age, ability and advancement, two things must guide the teacher in the selection of the matter to be studied: (1) the length of time to be devoted to the subject; and (2) the objects for which it is studied.

It will perhaps be quite within the true limits to say that, in the public schools of this state, the time given to United States history does not exceed one year. Probably a lower estimate would be more accurate. And this with boys and girls ranging from fourteen to eighteen years. It must be clear that, even under more favorable circumstances as to age and attainment, one school year would suffice to give but a fair outline of our history.

The special purpose for which the history of the United States is taught in the public schools has been stated to be preparation for American citizenship. The requisites of this are intelligence and conscience—an intelligent understanding of the theory and history of American institutions, and a conscientious disposition to promote the good of the whole. This latter can come in the fullest degree only with general moral culture; but notable examples of devotion to a righteous cause, patriotism and self-sacrifice will do much to stimulate and maintain this sentiment.

What parts of the subject will furnish the intellectual basis for good citizenship?

The aboriginal period, so-called, and the periods of discovery, settlement, and inter-colonial wars hold only a subordinate relation to this end; and therefore should receive relatively but little attention. It is not as antiquarians that the pupils in the public schools should study this subject; rather as participants in the actual affairs of to-day. The physical conditions, in so far as the

have determined our history, the character of the early settlers, forms of government, relations to the mother country, religion, etc., are all proper subjects of study, if held in due subordination to those periods more closely and directly connected with the end to be attained.

The ideas and principles of government contended for in the Revolutionary struggle, with the leading political and military events of the period, should be made the subject of full and close study. Following this should be a clear and comprehensive analysis of the Constitution. This study of the Constitution is necessary, as embodying the American theory of government, and as being the formal exposition of the mechanical system for carrying this theory into execution. It is necessary also to the intelligent comprehension of our course as a nation under this system.

It is not the purpose here to make any analysis of the period of administrations. This is the era of national development, and should receive a large share of the pupil's attention. It is the period of our really national history; the one that has given us whatever we have that may be called a national policy. The pupils should study those epochs and lines or threads in this period that have led to the unfolding and fixing of this national policy.

W. W. PARSONS.

READING.

IN a short article in this department in the Journal for April, it was suggested that the understanding and the imagination had each a way of its own in expressing individual ideas.

Language of the understanding may be defined as language which gives to objects of thought only those attributes and relations which they actually possess, and which directly expresses objects of thought, attributes and relations, by naming them.

Language of the imagination gives to objects of thought attributes and relations which they do not actually possess, and indirectly suggests objects of thought, attributes and relations by giving (1) an attribute for the object; (2) an object for an attri-

bute; (3) the time for the object; (4) the place for the object; (5) the cause for the object; (6) the effect for the object; (7) the purpose for the object; (8) the whole for a part; (9) a part for the whole; (10) an object of thought like the one suggested; (11) an object of thought unlike the one suggested; (12) an accidental accompaniment for the object of thought.

The following illustrative examples will indicate more clearly than the abstract definitions, the thought intended to be conveyed. In each case the sentence numbered *a* is intended to express a thought in language of the understanding, and the sentence numbered *b* is intended to express the same thought in language that shall include language of the imagination.

1. Attributes which they do not actually possess are given to objects of thought.

a. The child *weeps*.

b. The tree *weeps*.

2. An object of thought is suggested by an attribute.

a. Belgium's capital had gathered then her *beautiful women* and her *brave men*.

b. Belgium's capital had gathered then her *beauty* and her *chivalry*.

3. An attribute is suggested by an object of thought.

a. He showed the *fierceness* of his disposition.

b. He showed the *tiger* in his disposition.

4. An object of thought is suggested by giving its time relation.

a. Remember the *assassination of Caesar*.

b. Remember *March*, the *ides of March* remember!

5. An object of thought is suggested by giving its place relations.

a. He smote the *people* living in the city.

b. He smote the *city*.

6. An object of thought is suggested by giving its cause.

a. We read the *works* of Milton.

b. We read *Milton*.

7. An object of thought is suggested by giving its effect.

a. We plant a *tree*.

b. We plant a *shadow*.

8. An object of thought is suggested by giving its purpose.
 - a. *Men intending to benefit society* have founded many good institutions.
 - b. *Benefit* has founded many good institutions.
9. A part is suggested by giving the whole.
 - a. We are citizens of the *United States*.
 - b. We are citizens of *America*.
10. The whole is suggested by giving a part.
 - a. Give us this day our daily *food*.
 - b. Give us this day our daily *bread*.
11. An object of thought is suggested by giving one like it.
 - a. Go ye, and tell *Herod*.
 - b. Go ye, and tell that *fox*.
12. An object of thought (which may be a judgment) is suggested by giving one unlike it.
 - a. Ye are not the people, and wisdom will not die with you.
 - b. No doubt but ye are the people, and wisdom will die with you.
13. An object of thought is suggested by giving an accidental accompaniment of it.
 - a. The *choice of the people* governs this country.
 - b. The *ballot box* governs this country.

The learning of the difficult names which the rhetorics apply, somewhat arbitrarily, to the above forms of language, may be deferred until quite late in the pupil's course, or omitted altogether. When he meets these forms of expression in his reading it is not essential that he think the arbitrary names which custom has applied to them, but it is important that he see the relations involved.

In reading the sentence, "The Lord is my shepherd," if he thinks, "As the shepherd tenderly cares for his sheep, so the Lord cares for me," he can very well afford to omit from his thinking the word metaphor. Indeed, it may be claimed that not to know their arbitrary names is a positive advantage to the young learner in dealing with these forms of expression. A very vague perception of the relation involved may suggest to him the

name of the figure, and if, half guessingly pronouncing, that relieves him from further responsibility, he has not received from the difficulty the strength it is capable of affording him. If, on the other hand, not knowing the name, he is required to see clearly and to state, in the definite language of the understanding, the relation involved, he soon acquires perfect mastery over such forms as well as the power of independent thinking in other directions.

Perhaps no power of the young mind needs more restraining and directing than the imagination. It is more rational that this restraining and directing influence reside within, than without, the student's mind. The understanding is the natural check to the imagination.

The following forms of analysis have been found to be useful:
The tree weeps.

"Tree" is language of the understanding, because it directly expresses an object of thought by naming it. "Weeps" is language of the imagination, because it gives to the object, "tree," an attribute which it does not possess.

Belgium's capital had gathered then her beauty and her chivalry.

"Beauty" and "chivalry" are language of the imagination, because they indirectly suggest objects of thought, beautiful women and brave men, by giving attributes of them.

We celebrate the fourth of July :

"Fourth of July" is language of the imagination, because it indirectly suggests an object of thought, the Declaration of Independence, by giving its time relation.

With the slight modification necessitated by the different relations involved this form will apply to all cases, and will require close thinking and definite expression.

JOSEPH CARHART.

PRIMARY DEPARTMENT.

[This Department is conducted by Lewis H. Jones, Prin. Indianapolis Training School.]

PRIMARY NUMBER.

NOTATION.

WHEN pupils are able to read readily the numbers between ten and twenty as one ten and a certain number of ones, teach them to read these same numbers by their usual names,—fifteen, seventeen, etc. Do this in the following manner: Take one ten of sticks (with rubber band placed over them) and five sticks, and let pupils tell what you have. Say very distinctly, "When people have one ten of sticks" (holding up the bundle) "and five sticks" (holding up the five sticks), "all loose together" (taking the rubber band off the one ten of sticks and mingling them with the five loose sticks), "they say *fifteen* sticks." After repeating this work sufficiently with the objects, represent one ten and five ones on the black-board, and have pupils come one by one, and, pointing successively to the figures (commencing on the left), recite "One ten and five ones are fifteen." So on to twenty. Teach pupils to spell names of numbers to twenty. Dwell carefully on the objective illustration of the statement, "Two tens are twenty." Take up one more stick and say, "I have twenty sticks and one stick; or twenty-and-one sticks." Write twenty-and-one on the board; cross out the "and," saying, "People have quit saying 'twenty-and-one'; they say, instead, '*twenty-one*.'" Write it so on the board, and teach its spelling. Now represent on the black-board two tens and one one. Teach pupils to recite, pointing successively to the figures, "Two tens and one one are twenty-one." Pursue a like method with each number to thirty; after this amount of work has been thoroughly illustrated objectively, the sticks may be laid aside, except at the commencement of each decade of numbers.

Continue to show with sticks, as heretofore indicated, that "Three tens are thirty," "Four tens are forty," "Five tens are fifty," etc. The intermediate numbers may be represented at

once upon the black-board, and pupils may at once recite, "Five tens and six ones are fifty-six," "Eight tens and nine ones are eighty-nine," etc., without waiting for the use of objects. After the numbers have been developed and taught to ninety-nine, the teacher should place on the board a large list of numbers, ranging from twenty to ninety-nine inclusive. She should then have pupils make comparisons of these numbers as to value, in response to her questions or directions. "Find a number greater than twenty." A pupil finds, perhaps, thirty, and recites "Thirty is greater than twenty." "Find a number greater than thirty." Pupils keep selecting until at last ninety-nine is reached. The teacher has pupils search until they are satisfied that there is none greater than ninety-nine. The teacher then states very plainly that ninety-nine is the largest number that can be expressed by two figures. Pupils are thus made desirous of learning how to use more than two figures in expressing numbers.

Up to the present time no reference has been made to tens' place or ones' place, but all representing has been done as the result of certain relations in which the teacher has purposely placed things. The pupil now has in his possession, unconsciously to himself, however, the ideas "tens place" and "ones place"; but he does not need as yet the terms for these ideas. In like manner the pupils have the ideas of "unit of the first order," and "unit of the second order"; but they do not need at present any term for these ideas, since they do not need to refer to them in reciting, and since their ideas of number are not yet sufficiently numerous to cause any danger of confusion.

When the proper time comes for the giving of such terms, "place" should be used for the spatial relation in which any particular figure stands to others in the representation of a number, and "order" for the special rank of any unit. If teachers would keep each of these terms devoted strictly to the expression of its own appropriate idea, much confusion would be avoided in the mind of the child. Many teachers who are rather careless, use these terms interchangeably, thus tending to obliterate in the mind of pupils all clear distinction between the real number scale which is being constructed by the mind, and the corre-

ponding representative scale, which enables us to picture so well by means of a few figures, the number ideas which we have originated. If these terms were kept distinct our nomenclature in notation would be more satisfactory than at present. We should have the terms "first order," "second order," and "third order" (or units' order, tens' order, and hundreds' order), naming the first three ranks of units as constructed in the making by the mind of the decimal scale. These three ranks of units constitute units' period. This period is a thought product, and consists of ranks of units so constructed by the mind that they stand in this definite decimal ratio to one another in value. This first (thought) period constitutes the commencement of the (thought) scale; which the pupil may extend indefinitely as he enlarges his knowledge of numbers.

In representation we should in like manner have a consistent nomenclature. Ones' place, tens' place, and hundreds' place constitute ones' period. This (representative) period is the commencement of the development of the (representative) scale, consisting of a series of spatial relations, which might at first have extended in any direction, but which is now by general consent considered to extend right and left in a horizontal line. This scale is enlarged from time to time by pupils as the growing thoughts of numbers demand new representatives. Thousands' place, ten-thousands' place, and hundred-thousands' place make up the thousands' (representative) period; and so on through the twenty or more periods which are recognized by mathematicians.

Another paper will show how to develop and apply these terms according to the growing needs of the pupils.

SUPPLEMENTARY PREPARATION.

BESIDES the definite preparation of subject-matter and methods which every thorough teacher recognizes he must make for his daily work, there is another equally necessary; but it is not so generally recognized, nor has it generally been believed that there is any definite, philosophical way of making such *supplementary* preparation.

The preparation of subject-matter and one's method of instructing is largely an intellectual process. The supplementary preparation here referred to is almost wholly emotional and moral. It consists in putting one's self into the *teaching spirit*.

Whatever may be the petty annoyances of life to pupils or teachers, whether they result from the circumstances of the school, or from outside life, nothing should be allowed to disturb the spirit or abate the enthusiasm of the teacher while engaged in instruction. The emotional nature should be wrought into such state of intense feeling that every intellectual effort shall be given with beautiful and forceful effect. In order to put one's self into such state it is only necessary to enter into a philosophical process of meditation on those things which tend to make one *wish* to teach *well*. For instance, reflect on the real worth of the soul, and hence on the *possible worth* of each boy or girl, if only one could develop the hint of perfection found in each. Remember every flush of feeling seen in the face, or gleam of intelligence in the eye; recall every act of courtesy, kindness, or helpfulness done by any pupil under your care; consider the dignity of a character in which these actions should result from pure and well-founded principles as motives, and it will result that there will spring up in your emotional nature a stronger desire than ever before to be of service in developing such character. Continue the thought by considering of what advantage it must be to each and to all to receive in its fullness the benefits of good instruction and careful discipline.

Each teacher knows some man or woman who is of more than ordinary value in the community; who possesses some rare qualification for public business, or some happy gift in social affairs; who has the power, by personal presence, of reviving courage in the hopeless, of lifting burdens from weaker shoulders, of beautifying and dignifying the common events of life.

The hope of being able to assist in making of each pupil such man or such woman by the hopeful, helpful influences of the school may be made a powerful means of deepening the teacher's earnestness, and exciting his enthusiasm, i. e., of putting the teacher into the *teaching spirit*.

OFFICIAL DEPARTMENT.

[From the Letter-Book of the Superintendent of Public Instruction.]

EXAMINATION FOR STATE CERTIFICATES.

We are authorized to announce that the State Board of Education will examine applicants for state license in the City of Indianapolis, beginning at 9 o'clock A. M., Tuesday, June 19, 1883. The requirements of the examination are as follows: Applicants shall present to the Board statements setting forth the names of the institutions at which they have studied, and the courses of study they have pursued and completed; and shall furnish satisfactory evidence, by reference, certificate or otherwise, that they have taught or supervised school work for at least seven years of eight months each, of which two years shall have been in Indiana; that during this period they have maintained, and that they do still maintain a good character; that they have been successful as educators, showing superior ability to instruct and discipline. Applicants are requested to send these statements to the Superintendent of Public Instruction, Indianapolis, at their earliest convenience.

The subjects on which they will be examined are as follows:

For Certificate of Second Grade.—Reading, Writing, Orthography, Arithmetic, Grammar, Geography, including Physical Geography, United States History, Physiology, Elements of Algebra, Plane Geometry, Elements of Physics, Elements of Zoology, Elements of Botany, Constitution of United States, Moral Science, and the Science of Teaching.

For Certificate of First Grade.—In addition to the above named branches, Complete Algebra, Elements of Rhetoric, Solid Geometry, General History, English Literature, Elements of Chemistry, Latin, embracing four books of Cæsar's Commentaries, and four books of Virgil's *Æneid*, or their equivalents.

POWER OF SCHOOL BOARD TO BORROW MONEY.

[Letter-Book G, p. 272] You ask whether school trustees of a town or city can borrow money to make repairs, and give their note for the same.

In answering this question the following distinction must be observed: They can execute notes as evidence of indebtedness necessarily or reasonably contracted for the benefit of the school corporation, but they can borrow money only by the issue of bonds. On their power to execute notes, see the cases of *Sheffield Township v. Andress*, 56 Ind. 157, and *School Town of Monticello v. Kendall, Administratrix*, 72 Ind. 91.

Members of a town school board are trustees of a municipal corporation. Their powers and duties are prescribed by statute. They can not bind the corporation to the repayment of money borrowed in its behalf unless authorized by law to do so, and when the law prescribes one way of doing this they can not do it in any other way. Hence I infer that they can not make the school revenues liable by giving their note in exchange for a loan of ready money, even though the note should profess on its face to be given by them as school trustees and in behalf of the school corporation. They can only raise money in anticipation of their revenues in the manner prescribed by sections 4488, 4489, 4490 Revised Statutes, by issuing bonds on authority of an ordinance of the town trustees or city council.

The purpose of these sections is to subject the school trustees to the control of the town or city government in the matter of contracting indebtedness; and I think the courts would consider borrowing money on notes to be an evasion of the law.

WOMEN AS SCHOOL OFFICERS.

[G. 276.] I am reliably informed that there have been several instances of the appointment of women as school trustees in towns or cities, though I can not name the places. The late Attorney General, you may be aware, expressed serious doubts of the constitutionality of the act authorizing the election of women to school offices, and held that they were ineligible to the county superintendency on the ground that county officers are required to be electors. This reasoning does not apply to the office of school trustee of a city or town, and until the act referred to [Sec. 4540 R. S.] is decided by the courts to be unconstitutional, there is no ground on which to question the eligibility of women to that office.

ADOPTION OF TEXT-BOOKS FOR THE FUTURE.

[G. 270.] While there seems to be no law directly prohibiting a county board from making an adoption of text-books to take effect six months or a year in the future, on the expiration of a previous adoption, yet I think such action would be highly objectionable and certainly contrary to the intention of the law. The composition of the county board might be entirely changed before the end of six months, or, if not changed, circumstances might have arisen that would make a change of policy desirable. Indeed, I seriously doubt the binding force of an adoption of books before the necessity for it has arisen; that is, before the expiration of the previous adoption.

[G. 275.] While the section of the law [4446 R. S.] that provides for the establishment of joint graded schools by two or more distinct corporations is silent as to the proportion in which each shall con-

tribute to the expense, yet I am of the opinion that their contributions should be in proportion to the number of pupils they will each send to the new school. Such is the rule in the case of joint district schools [Sec. 4513 R. S.]; and I think the same reasons apply to joint schools of all kinds.

CHANGE OF THE EDITION OF A TEXT-BOOK.

[G. 280.] Whether the change from one edition of a text-book to another by the same author is such a change as is prohibited by law, depends, I think upon circumstances. The intent of the law is to save the patrons from the expense involved in frequent changes of books. If the new edition is so little different from the old that both can be used together, and those children who are supplied with the old need not purchase the new, I think the new edition may be adopted for the benefit of those who have to purchase for the first time. If the adoption of the new edition should necessitate the disuse of the books already on hand, I think it would be illegal.

JOHN W. HOLCOMBE,
Sup't Public Instruction.

April 15, 1883.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

Does your subscription to the Journal expire with this issue? If so renew at once, that there may be no break in your file.

The editor returns his thanks to D. M. Geeting, superintendent of Daviess county, for a beautiful, polished specimen of Cannel Coal, just received.

Next month's Journal will contain an article on "Buckeye" *vs.* "Hoosier" (a comparison of the educational interests of Ohio and Indiana) by J. Fraise Richard, of Mansfield, Ohio.

The Executive Committee of the State Teachers' Association (J. N. Stady, chairman), recently held a meeting and decided to hold the next meeting at Indianapolis, beginning December 26th. Preliminary steps toward making a programme were taken.

The *Canada School Journal*, one of the best that comes to our table, contained in its April issue two articles reprinted from this paper, both from the "Department of Pedagogy." (It gave credit for but one, however.) The Journal feels complimented in having other first-class papers transfer its articles to their "Practical Department."

NEW LAW ON EXAMINATIONS.—The new law concerning teachers' licenses will take effect prior to the June examination. After that licenses will be issued for 6, 12, 24, and 36 months, and a 6 month license issued but once. This means higher attainments. It also means fewer examinations for well qualified teachers. See April No. of the Journal for law in full.

THE NEW DEPARTMENTS in the Journal are meeting with general commendation. An educator whose articles have been as extensively published in the educational papers of the United States as those of perhaps any other man, writes as follows:

* * * "With your new departments, I now regard the Indiana School Journal the best and *ablest* school periodical published in the West, if not in the United States."

STATE CERTIFICATES.—Special attention is called to the notice in the Official Department of the examination for state certificates. A large number of the superintendents and teachers of the state are doubtless able to secure state certificates, and it is surprising that more of them do not avail themselves of this privilege. It is certainly desirable to hold this certificate from the State Board, and thus be at liberty to teach any place in the state, and not be subjected to recurring examinations.

NORTHERN INDIANA TEACHERS' ASSOCIATION.

The long-talked-of organization of the Northern Indiana Teachers' Association is to take place at Rome City, July 9th. It is to continue in session two days. The programme, at the time the Journal goes to press, is not yet completed, but enough is done to give assurance that the entertainment will be all that can be desired. The following persons will take parts: C. T. Lane, of Ft. Wayne; A. D. Mohler, of Huntington; J. A. Kibbie, of Kendallville; Wm. Ireland, of Wolcott; Miss Knowlton, of Logansport; E. E. Smith, of Purdue University.

J. K. Walts and D. W. Thomas have the matter in hand, and this is sufficient to insure success. Considering the time and the place of meeting, there ought to be 500 teachers in attendance.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR APRIL.

READING.—1. What is the distinction between didactic and emotional reading? 10

2. In what different ways may words, phrases, or clauses be emphasized? Name at least three. 3 pts, 3½ each.

3. What is the distinction between pitch and force? between force and rate? 2 pts, 5 each.

4. Underscore the emphatic words and phrases in the following lines:

"All worldly shapes shall melt in gloom,
The sun himself must die,
Before the mortal shall assume
Its immortality.
I saw a vision in my sleep,
That gave my spirit strength to sweep
Adown the gulf of time.
I saw the last of human mold,
That shall creation's death behold,
As Adam saw her prime."

10

5. Write five of the questions which you would ask as a preparation for the reading of the above lines. 5 pts, 2 each.

6. Read the above selection, and also one of prose.

2 pts, 1 to 2½ each.

GEOGRAPHY.—1. What three British Provinces near the Gulf of St. Lawrence? Name and locate the capital of the Dominion of Canada. 5, 5.

2. Where is Central America? How is it divided? 5, 5.

3. Of what groups of islands do the West India Islands consist? What are some of their commercial products? 5, 5.

4. Of what States are each of the following cities the capital: Atlanta, Boston, Concord, Montgomery, Augusta? 5 pts, 2 each.

5. What is the latitude of the North Pole? How many degrees from the North Pole is the tropic of Cancer? 5, 5.

6. What conditions are essential to plant-life? On what does the vegetation of different regions depend? 5, 5.

7. As we leave the tropics, going north, what changes are observable in vegetation? 10

8. Name and locate five peninsulas of Europe. 5, 2 each

9. Describe the surface of the Russian Empire, 10

10. What countries are occupied by the Malay race? 10

GRAMMAR.—1. Write a sentence in which *we* is used as a noun; one in which *+* is used as a noun. 5, 5.

2. What is the antecedent of a pronoun? Write a sentence containing a pronoun whose antecedent is a phrase. 4, 6.

3. Give three rules for spelling involved in the formation of the comparative degree. 3, 3, 4.

4. What is an auxiliary verb? An impersonal verb? 5, 5.

5. In what modes and tenses is the emphatic form of the verb found? 3 off for each error or omission.

6. What is the logical distinction between an adjective and an adverb? 10

7. Correct: The noun is the agent and the verb is the action. What part of speech is each boy in this room? 5, 5.

8. Simon Peter said, I go a fishing. Parse the object of *said* and the word *fishing*.

9. Give a rule for the use of the colon. 10

10. Write a sentence with a subordinate clause containing a participial phrase. Analyze it. 5, 5.

ORTHOGRAPHY.—1. What is the distinction between a vocal and a sub-vocal? Give 5 of each 2 pts, 6, 4.

2. What is the sound of *ch* in charlatan? charcoal? chimerical? charts? chimney? 5 pts, 2 each.

3. Name the vowel sound in God, good, food, fourth, host. 5 pts, 2 each.

4. Write each of the following words phonically, and indicate each accented vowel sound by the proper diacritical mark: *hiccough*, *wholesome*, *righteous*, *physic*, *jaundice*. 5 pts, 2 each.

5. Name the following punctuation points: ¶ " () [] " " " 5 pts, 2 each.

6. Spell twenty words dictated by the superintendent. 20 pts, 2½ each.

PENMANSHIP.—1. What is the unit for measuring the height of letters? The width? 5, 5.

2. Define main slant. Connecting slant. 5, 5.

3. Define base line. Head line. 5, 5.

4. Write the small letters which extend three spaces above the base line. Name four principal movements used in writing. 5, 5.

5. What instruction would you give for holding the pen? 10

NOTE.—Your writing, in answering the above questions, will be taken as a specimen of your penmanship, and will be marked 50 or below, according to merit.

ARITHMETIC.—1. Why does dividing the denominator of a fraction multiply the value of the fraction? 10

2. Reduce $\frac{12}{15}$ to its lowest terms, and give reason for your work. 5, 5.

3. 8 is $\frac{2}{3}$ of $\frac{3}{4}$ of $\frac{4}{5}$ of what number? 5, 5.
4. A man buys 5 lbs. avoirdupois of a drug at \$1 per lb., and sells it by apothecaries' weight at the same price per lb.; does he gain or lose? how much? 5, 5.
5. Multiply three hundred, and thirty-three hundredths by three hundred thirty-three hundredths. 5, 5.
6. A person bought 40 bales of cotton, 300 lbs. each, at 10 cents per lb.: 4 bales were burned; at what price per lb. must he sell the remainder to gain 10%? 5, 5.
7. The edge of a given cube is 24 inches; what is the edge of a cube whose volume is $\frac{1}{8}$ that of the first? 5, 5.
8. A, B, and C jointly inherit \$10,000, in the proportion of $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{6}$. C dies; how much do A and B receive? 5, 5.
9. If I mix 7 gals. of wine worth 67 cts. a gal. with 5 gals. worth 48 cts. a gal., how much water must I add to sell the mixture at 50 cts. a gal. with a profit of \$2 91? 5, 5.
10. 24 men do a work in 15 days of 10 hours each; how many days of 8 hours each will it take 60 men to do it? 5, 5.

THEORY OF TEACHING.—I In what does the Science of Teaching differ from the Art of Teaching? 20

2. In what does school education differ from education in its widest sense? 20

3. What are the three stages of intellectual growth which the teacher must consider in directing the study of his pupils? 20

4. What kind of language teaching is best suited to pupils in the primary and intermediate grades? 20

5. Why is technical grammar a difficult and unfit study for most children who are less than fourteen years of age? 20

NOTE.—The superintendent is advised to give credit to the applicant for the intelligence manifested by his answers rather than for their conformity with his own notions of their correctness.

UNITED STATES HISTORY.—I. Write a sketch, not to exceed two pages, of the recent civil war in the United States, noticing the events that led to it, the course of events in the war, and the general condition of the country at the close of the war. 100

NOTE.—In this sketch special attention must be given to conciseness of statement, orderly arrangement and clearness of expression.

PHYSIOLOGY.—I. What is the function of ligaments? 10

2. What is the difference between a voluntary and an involuntary muscle? What is the most important involuntary muscle? 2 pts, 5 each.

3. Why is it important in order that the child may acquire the habit of good penmanship, that a proper position of the pen shall be maintained from the first? 10

4. What is the number of permanent teeth? Separate them into classes? 2 pts, 5 each.
5. State the function of the perotid gland. 10
6. Why is it improper to take food while the body is in a state of fatigue from severe toil either of mind or body? 10
7. What are the lacteals? 10
8. Describe the heart. 10
9. What is the influence of alcohol upon the secretions? 10
10. What is the only perfect rest for the brain? 10

ANSWERS TO STATE BOARD QUESTIONS FOR MAY.

- ARITHMETIC.—1. The reciprocal of a number is unity divided by that number. $\frac{1}{2}$; $\frac{1}{3}$; $\frac{1}{4}$; $\frac{1}{5}$; $\frac{1}{6}$.
2. $4+6+2 \times (7-3)+9=10+2 \times 4+9=29$.
 3. a. The area of the head of the cylinder = $3\text{dm}^2 \times 3.1416 = 28.2744\text{scm} = .282744\text{sm}$.
b. $.282744\text{sm} \times 3 = .848232\text{cm}$.
 4. a. $\frac{2}{3}$ of $\frac{3}{4} = \frac{1}{2} = \frac{2}{4}$.
b. If $\frac{2}{3}$ of the vessel are worth \$9,000, $\frac{1}{3}$ is worth \$4,500.
c. If $\frac{1}{3}$ of the vessel is worth \$4,500, the whole will be worth 5 times that amount, or \$22,500.
 5. $\text{£}28 \text{ 11s } 8\text{d} + 4 = \text{£}7 \text{ 2s } 11\text{d}$.
 6. a. 12 hrs. — 8 h. 20 m. = 3 h. 40 m.
b. 3 h. 40 m. in time = 220 min.
c. As 4 min. in time = 1° in long., 220 min. = 55° long.
d. As the time of the second place is the earlier, that second place must be 55° west long. from Washington.
 7. a. $56\frac{1}{2}\%$ of 2000 lbs. = 1125 lbs., am't silver, avoirdupois.
b. $13\frac{3}{4}\%$ of 2000 lbs. = 275 lbs., am't gold, avoirdupois.
 8. a. Cargo = $18000 \times 165 = 2,970,000$ lbs.
b. Tare = 8% of 2,970,000 lbs. = 237,000 lbs.
c. Net weight of coffee = 2,970,000 lbs. — 237,600 lbs. = 2,732,400 lbs.
d. $2,732,400 \times 5 = 13,662,000$.
e. 13,662,000 cts. = \$136,620. Ans.
 9. $\frac{12}{10} : \frac{9}{14} \} :: 1.50 : 1.57\frac{1}{2}$. Ans.
 10. a. Each receives the same amount of pay, and as A receives twice the rate of pay that C does, he must work only half as many days as C does.
b. And as B receives $\frac{2}{3}$ as much per day as C does, he must work only $\frac{3}{2}$ as many days as C.

- c. Therefore the number of days C works, plus $\frac{1}{2}$ the number, plus $\frac{2}{3}$ the number must equal 90, as the three did the whole work in that time, and 90 will equal $\frac{2}{3}$ times the days C worked, and C would work $\frac{3}{2}$ of 90 days, or 40 days.
- d. A, who worked $\frac{1}{2}$ as many days as C, would work 20 days.
- e. And B, who worked $\frac{2}{3}$ as many days as C, would work 30 days; and
- f. $20 + 30 + 40$ days = 90 days, the whole time.

PHYSIOLOGY.—2. Muscles diminish both from lack of exercise and from over-exhaustion. In the one case the cells not used are gradually absorbed, as seen in the case of the paralytic; in the other case the tissue is torn down more rapidly than it is built up. It is necessary, therefore, to the growth of our muscles that they be regularly, moderately, and reasonably exercised. By this means a steady and uniform improvement is maintained by the healthy condition of the tissue-cells and by the additions from the increased flow of blood in them and supply of nutrition to them.

3. Whatever one continues to do in a certain way, though admitting of awkwardness and irregularity in the beginning, soon acquires a uniformity which acquires the name of "habit." As the proverb has it, "habits soon become second nature." It is therefore important that, in calisthenics or gymnastics, the trainer should insist upon accuracy of movement from the beginning. Accuracy, promptness, precision, and ease are thus acquired and not lost.

5. That action of cells by which material selected from the blood-current is worked up into their own substance, is termed assimilation. The tearing down of the substance thus formed, through the action of life, is termed *disassimilation*.

7. The steps preceding digestion may be counted as four: *Prehension*, or the obtaining and preparing of food, which be either mechanical or chemical; *mastication*, or the cutting and grinding of the food so that it may more readily absorb the digestive juices,—a mechanical operation; *insalivation*, (a) or the mechanical mixture of the saliva with the food; and *deglutition*, or swallowing. The steps of digestion, so far as the body is concerned, may be considered as three: *Insalivation*, (b) or the changing of starch into grape sugar by the action of the ptyalin of the saliva; *chymification*, or the mixture of the gastric juice with the food mass and the change produced in albuminoids by pepsin; *chylification*, or the mixture of the biliary, pancreatic and intestinal juices with the unabsorbed portions of food as they come from the stomach, together with the changes produced in starches, gums, fats, albuminoids, etc., by the bile, the trypsin of the pancreatic juice, and the intestinal juice.

9. Lymphatics, or absorbents, may be divided into two classes, *lymphatics proper* and *lacteals*. The latter differ from the former by being found in only one part of the body and by the additional function of carrying a portion of the chyle on its way to be mingled with the blood. The lymphatics closely resemble the veins in their structure, the frequent occurrence of valves giving them a linked appearance, and begin either as communicating cavities in, or small spaces between the tissues of the body. They all converge and finally empty into the thoracic duct or the right lymphatic duct. From these their contents go into the blood: At various points on their course the lymphatics have enlargements, due to an accumulation of cells, and termed glands. These are specially numerous in the neck, in the mesentery and in the groin. The function of the lymphatics is to gather up the excess of nutriment material which may be supplied by the blood to the different tissues, as well as a portion of worn out material not taken up by the capillaries, and to pour all of this back into the blood near the heart.

READING.—[For suggestions in answer to questions 2 and 3 upon this subject, the teacher is referred to two articles in the School Journal, both of which are excellent and very suggestive. The first is "Silent Reading," by Geo. F. Bass, in the March number, and the other "Reading," by Prof. Jas. Carhart, in the April number. There is much food for thought in both these articles.]

PENMANSHIP.—1. A very rapid method is to place the books belonging to each section on the desks of one side of the room. Let the books be so placed that the first pupil's book will be at the bottom, and that of the last on top of the pile. At a signal from the teacher, the first pupil of each section leaves the lower (his own) on his desk, and, at the signal, passes the remaining books to the pupil on the right, who receives them, leaving the lower one on his own desk, and passing the remainder, at the next signal, to his neighbor, and so on till the books are all distributed.

2. The right oblique position is the one generally preferred by those who write much. Turn the right side partially toward desk, place the feet level on the floor. Let the copy-book be placed on the desk at an angle of about forty-five degrees. The right arm should be at right angles with the ruled lines of the page on which the pupil is writing.

3. The *finger movement* is made by the extension and retraction of the pen-fingers and the thumb, and is chiefly used in making the upward and downward strokes. The *fore-arm movement* is made by resting the arm on the muscles below the elbow, and is employed in making strokes in any direction. The *whole-arm movement* is produced by the action of the whole arm from the shoulder, resting

on the nails of the third and fourth fingers. This movement is mainly used for striking large capitals. The *combined movement* consists in the united movement of the fore-arm, hand, and fingers. This movement answers the requirements of business use better than any other.

4. The *base line* is the horizontal line on which the shortest letters rest. The *head line* is the horizontal line to which the small letters extend. The *right curve* is a part or the whole of the right side of an oval. The *left curve* is a part or the whole of the left side of an oval.

5. Analysis: *t*—right curve, slanting straight line, lower turn and right curve, with cross at one-third from the top; *h*—fifth and third principles united, joined in a point at the base line; *g*—left curve the fourth and sixth principles; *i*—left curve, first principle and dot at one space above it; *x*—third principle and slanting straight line, as the cross line.

GEOGRAPHY.—1. Cape Farewell projects from the southern coast of Greenland; Cape St. Lucas, from Lower California into Pacific Ocean; Cape Mendocino, from California into Pacific Ocean; Cape Hatteras, from eastern coast of North Carolina into the Atlantic Ocean; Cape Sable, from southern extremity of Florida into the Gulf of Mexico.

2. Rocky and Appalachian systems. The highlands and the Andes, and the table-land of Brazil.

3. The Mississippi and St. Lawrence systems, on the South; the Mackenzie and Hudson Bay system, on the north; Atlantic highland system east of the United States.

4. Alaska is northwest of North America. It is a cold, barren region; almost destitute of vegetation. Its fur-bearing animals form the chief source of wealth. It is inhabited mainly by Esquimaux and Indians. Sitka is the chief settlement.

5. In the torrid and south temperate zones. In the northern part of South America, occupying the eastern part of the Plateau of Guyana. It belongs to Britain, Holland, and France. The Orinoco rises in the Plateau of Guyana and flows eastward into the Atlantic Ocean. Caracas is the capital and chief city.

6. Lake Superior, in North America; Titicaca, in South America; Ladoga, in Europe; Caspian Sea, or Lake, in Asia; and Victoria Nyanza, in Africa.

7. To England; to Russia; to England; to the Dutch; to Spain.

8. Anthracite coal differs from bituminous coal in containing but little bitumen.

9. Melbourne and Sidney. Osaka, Yokahama, and Nagasaki.

10. Cape Town. Wool and cotton.

MISCELLANY.

S. E. Harwood and Rob. Jud. Alely will open a normal in Spencer July 23d.

A. N. Higgins and V. E. Livengood have a normal of over 40 at Veedersburg.

The New York State Teachers' Association will convene at Lake George, July 5th.

J. L. Lucas and I. G. Stark are conducting a normal at Brownstown, with an attendance of about 40.

County Supt. M. A. Mess and A. N. Crecraft will hold a 5-week normal at Brookville, beginning July 23d.

Lee Ault and J. M. Strasburg will conduct a normal at Centerville beginning June 25th and continuing 5 weeks.

The annual meeting of the Wisconsin Teachers' Association will be held at Sheboygan, July 10th, 11th, 12th, 1883.

Harvard University has an invested endowment of \$4,511,861, from which an income was received last year of \$233,352.

The editor can speak from personal observation of the excellence of commencement exercises of the North Vernon high school.

The expenses of the collegiate department of Yale College, last year, amounted to \$166,799, nearly one-half of which was for salaries.

Butler University will open a department of Theology next fall, and Dr. A. R. Benton will be placed in charge of it. No better choice could have been made.

For the past two years, in Chicago, pupils have been passed from the district schools to the high school, on the recommendation of the principals, without examination.

HICKSVILL, O.—C. A. Fyke, formerly of Butler, Ind., is in charge here. The high school gave an entertainment recently, and cleared \$36, with which to buy an organ.

BUNKER HILL.—The school house at Bunker Hill, Miami county, was blown down in a recent storm. The children had been dismissed only fifteen minutes before the occurrence.

QUERIES.—1. What is the origin of the sign \$?

2. Why will a hoop remain upright while rolling, and fall as soon as it stops?

3. Who was the man with the "Iron Mask"?

The ladies predominate. In Centre township (Marion county) outside of Indianapolis, there are employed twenty-three teachers, twenty of whom are ladies. It is needless to say that the schools are in a good condition.

KOSCIUSKO COUNTY.—Supt. S. D. Anglin, at the May meeting of the Board of Education, submitted his annual report. It sets forth in a very satisfactory way the condition of the schools and their needs. The report is a good one.

HO! FOR WYANDOTT CAVE.—A party of teachers and their friends will leave Indianapolis June 19th, for a pleasure trip to Wyandotte Cave, Ind. Persons wishing to join the party can learn particulars by addressing M. L. Rinehart, Indianapolis.

We have received the *College Record*, a monthly quarto published at Merom, Ind., in the interest of U. C. College, and edited by P. A. Canada, assisted by R. H. Tate, D. C. Hubbs, and G. W. Shepherd. The Record is a sparkling little sheet, well executed, and it should receive encouragement by a generous patronage.

Santa Fe, New Mexico, will celebrate its 333d anniversary this year. Tertio-Millennial is what they call it. It includes a "Mining and Industrial Exposition," and various other attractions. It will begin July 2d and continue one month. What other place in the United States was settled by Europeans one-third-of-a-million years ago?

WILL MAKE IT AN EVEN DOZEN.—Mr. W. H. Brearley, of the Detroit (Mich.) *Evening News*, who has personally conducted \$22.00 round trip excursions "From Detroit to the Sea," every year for the past seven years, and who is to take three more this year, in June and July, has made the ascension of Mt. Washington nine times, and this year proposes to make it an even dozen.

PRODUCTIVENESS OF INDIANA.—For the year 1882 Indiana produced 45,461,800 bushels of wheat. Illinois is the only state in the Union that produced more. The five great corn-producing states are the following, named in the order of their rank as shown by the production for 1882: Illinois, Iowa, Missouri, Kansas, Indiana. When it is remembered that with a single exception (W. Va.) Indiana is the smallest state west of the Alleghany Mountains, this is a flattering showing.

WISCONSIN.—The State of Wisconsin is better provided with normal schools than is any other state. The normal school fund arising from the sale of swamp-lands already amounts to more than a million dollars, and the yearly income exceeds \$85,000. Four schools are already in successful operation, and a fifth will soon be estab-

lished at Milwaukee. Each school has a "Theory and Practice" professor, who is also a conductor of institutes throughout the state. The Indiana Legislature thinks it a hardship to support one school, and Ohio can not afford any.

High school commencements will occur as follows: Anderson, 9 graduates, May 4th; Seymour, 6 graduates, May 24th; Frankfort, 4 graduates, June 1st; North Vernon, 5 graduates, May 18th; Columbia City, 5 graduates, June 1st; Ligonier, 10 graduates, May 10; Rushville, 10 graduates, June 7; Winchester, 5 graduates, May 31; Warsaw, 7 graduates, May 25; Franklin, 5 graduates, May 25; Edinburg, 10 graduates, May 24.

College commencements will occur as follows: Butler, June 15; Purdue, June 7; State University, June 13; State Normal School, June 15.

NORMAL SCHOOL COMMENCEMENT.—The closing exercises of the State Normal School will begin on Sunday, June 11th, with a Baccalaureate Address by the President. On Monday evening one of the Literary Societies will have public exercises, followed by exercises of the other Society on Tuesday evening. Wednesday evening will be devoted to a social gathering of the students of the different classes. Thursday evening there will be an address before the Alumni Association, which will be public. The graduating exercises will occur on Friday morning, June 15th, and the closing entertainment will be a banquet of the Alumni on Friday evening. All the old graduates and under graduates are invited to be present during the entire week. Arrangements will be made for their comfortable entertainment at low rates.

THE ISLAND PARK ASSEMBLY, the "Chatauqua of the West," will open July 11th. It will be preceded by a Teachers' Normal and a Musical College, opening July 2d and lasting to July 24th. Among the instructors in the normal are W. H. Payne, of Mich.; J. Fraise Richard, of O.; John M. Bloss, ex-State Supt. of Ind. In connection with the Assembly will be schools of Elocution, Languages, Kindergarten, Microscopy, Sunday Schools, Popular Lectures, etc. This is a splendid summer resort, at which a person can combine pleasure and instruction. It is located on a beautiful island in a charming little lake near Rome City, on the Grand Rapids & Indiana Railroad. For full particulars address P. N. Stroup, Secretary, La Grange, Ind.

RUSHVILLE.—On Friday evening, May 11th, the people of Rushville were treated to an elocutionary contest by Mrs. R. A. Moffitt, principal of the high school. There were ten contestants, members of Mrs. Moffitt's elocution class, and their merits were so nearly

equal that the judges found but a narrow margin between the highest and the lowest. The three best received prizes of \$15, \$10, and \$5 in gold. On the following evening the three prize recitations were repeated, accompanied by a programme of excellent music. One thing that gave zest to the last evening, was the fact that no one knew who the winners were, not even the persons themselves, until they were called out by the judges to recite. The work of these young persons, under the skillful training of Mrs. Moffit, is an educating force in the community.

THE STATE NORMAL SCHOOL.—The State Normal is closing the largest and most successful term of its history. This school is noted for the amount of time devoted to professional work. No other school in the United States devotes so much time to the study and practice of the theory and art of teaching. It is one of the few normal schools that make professional study the chief characteristic. It admits none but teachers, or those preparing to teach.

It has one course of study peculiar to itself, viz: a course for college graduates. This department is founded on the theory that teaching is a *profession*, and that the college graduate needs to *study* it just as he would need to study law or medicine in order to practice either successfully. These graduates have only seen subjects from the student's standpoint; they are taught here to look at them and review them from the teacher's standpoint.

The present class is composed of graduates from at least three different colleges.

PURDUE ITEMS—There are said to be fifty applicants for the Professorship of Chemistry and Physics, vacated by the resignation of Prof. H. W. Wiley. This gentleman enjoys the felicity of drawing four salaries, that of Professor at Purdue, of State Chemist, of U. S. Chemist, and of President of the Lafayette Sugar Refinery and Sorghum Manufactory. The Department of Latin and Elocution at Purdue having been abolished after the present year, Miss A. S. Peck has resigned, and talks of spending some time in Europe. The determination of the Board of Trustees to make Purdue University more than ever distinctly industrial in its line of education is shown by the changes being made in the curriculum of the institution for next year. It is proposed that, when a student leaves Purdue University with a diploma, he shall have actual commercial value in the world. The total enrollment of Purdue for the past year is 219,—College and Special Schools 104, Academy 115.

ASBURY UNIVERSITY.

As has been before announced in the Journal, W. C. DePauw, of New Albany, one of the richest and one of the most benevolent men in the state, some months ago proposed to give to Asbury University *a million dollars* on two conditions: 1. That Putnam county, in which the college is located, should raise \$60,000 with which to purchase additional grounds. 2. That the state at large should add \$150,000 to the present endowment.

These reasonable conditions, at the end of almost a year, have not been complied with. This is not creditable to the denomination. The Methodist church is the strongest in the state, it already has the largest college, it contains a great deal of wealth, and, under the circumstances, it should raise the money required on two months' notice. This gift and bequest will in the end amount to \$2,000,000 or more, and it can not be possible that this great church will indifferently cast this princely endowment over its shoulder. Such an act, if it were possible, should raise a question as to the quality of Christianity preached in the church.

THE STATE UNIVERSITY.

It is safe to say that the State University was never in so good condition as at present. The discipline, the instruction, the moral sentiment, the scholarship, are all of a high order.

President Moss is sending out the following circular to superintendents:

"This University is now fully recognized as a part of the public school system of the state. The Endowment Law, enacted by the last Legislature and now in force, commits the state to the worthy support of the University, and will secure its ample establishment and equipment at no distant day. The commissioned high schools are furnishing us every year an increasing number of students, and there is no reason why every high school in the state should not hold such a commission, and graduate its pupils into our Freshman Class. Thus all parts of the system become vitally connected, the studies in the graded school and in the University become adjusted to each other through the high school, and the pupil may begin in the primary room and end in the University, without interruption or delay, or the payment of a penny for tuition.

The commonwealth is to be congratulated upon such a condition of things and such a prospect. No one who is interested in the advancement of the state, in virtue and knowledge, can be indifferent to the increase of facilities for the highest and best education. The young people of the state should appreciate the opportunities that

are thus freely offered to them, and their teachers should urge them to be in earnest in improving these opportunities to the utmost.

We ask therefore with confidence that you will co-operate in bringing to the knowledge of your pupils, and of all young people whom you can reach and influence, the growing advantages of the Indiana University, its relation to the public school system of the state, and the place it is intended to hold among the agencies by which the strength and greatness of the state are to be secured and retained.

We shall be glad to have you visit the University at your convenience, or to furnish you with catalogues and other information at any time."

NORTHERN INDIANA NORMAL SCHOOL AND BUSINESS INSTITUTE.

The writer recently spent a day at the above-named school, and while there made the following notes:

"*This is the largest term yet.*" This has been said of every spring term since the first, ten years ago. The actual enrollment for this term is a little in excess of 2,000; but as students are allowed to enter at any time and leave at any time, the actual attendance at the time of the visit was about 1,600. Twenty-three teachers are employed. Besides the main building and two large dormitories, H. B. Brown, the principal and proprietor, owns 18 different houses, most of which he has built, and some of which are large brick blocks. One of them, besides a large hall for the Commercial Department and a large Art Room, contains 59 rooms for students. Mr. Brown has put into this property over \$125,000, cash, and he estimates the whole at \$200,000. His receipts on rentals alone amount to over \$7,000. He has plans for another \$25,000 building, to contain a Library room 60x60; a Science room 40x60; a Laboratory and Scientific Work room 40x40; a Fine Art room 40x60; a Book Store room 25x50; also large rooms for Elocution, Music, and other large classes in special studies.

As fast as money is made it is invested to increase the capacity and efficiency of the school. In answer to the question, "How much would you make in a year above expenses, provided you should make no further improvements, and provided the attendance should average the same as last year?" Mr. Brown answered: "O, something over \$20,000."

The special departments in this school are surprisingly large. The actual business commercial school is perhaps the largest and best in the state. The number taking the full course is about 100. The number in the musical department, studying music only, is over 200.

The fine art department is well patronized. The only *extras* in the school are instrumental music, telegraphy, and painting.

Every state in the Union, except Alabama and Georgia, and most of the territories, are represented in the school,—there are about 20 from Texas, and several from Canada.

The library contains about 3,000 books, free to the students. The laboratory has just been re-fitted and enlarged. Good rooms, neatly furnished to accommodate two, are rented at from 35 cts. to 50 cts. each per week, and very good board is furnished at \$1.40 per week.

The recitations witnessed evinced thorough preparation and mastery of the subject on the part of the teachers, and a lively interest on the part of students.

A remarkable fact—Although there are no rules in regard to study hours or behavior, except the general one, that each one is expected to be a gentleman or a lady and attend to business, there has not in the ten years been a case of scandal connected with the school.

The last note made was that Prof. Brown is not only one of the livest teachers, but one of the most cordial, gentlemanly gentlemen in the state, and has business capacity that would make him a good railroad president.

PERSONAL.

J. M. Stallworth is located at Henryville.

Sheridan Cox has been re-elected at Kokomo.

T. J. Sanders will remain at Butler another year.

W. H. Fertich stays at Mishawaka another year.

J. B. Munger is principal of the Cherubusco schools.

J. Fraise Richard is doing a good work at Nashville.

T. B. Swarts is superintendent of the Elkhart schools.

G. G. Manning will run the Peru schools another year.

Samuel E. Harwood will continue as Supt. at Spencer.

J. K. Walts is to remain at Logansport as superintendent.

T. B. Swartz is re-elected at Elkhart, at a salary of \$1500—an increase.

D. W. Thomas seems to be a fixture at Wabash—he is fixed for next year.

W. P. Shannon has been promoted to the superintendency of the Greensburg schools.

T. W. Fields has removed from Ridgeville and permanently located at Portland.

Thos. Bagot, superintendent of Ripley county, has in press a work on "Plane Surveying."

John Kinney, an Ohio man, is to be superintendent of the Columbia City schools, next year.

M. W. Harrison is re-elected superintendent of the Auburn school for next year, at an increased salary.

Pres. E. E. White, of Purdue, is to make the address before the Alumni of the State Normal this year.

W. H. Venable, the poet and historian, of Cincinnati, will deliver the annual address at Purdue this year.

J. O. Spurgeon has had charge of the Jonesboro school, and is also trustee of Pleasant township, Grant county.

Charles F. Allen, a teacher of Marion county, died May 6th, of typhoid fever. He was a worthy young man.

J. C. Eagle still holds the fort at Edinburg. His high school gave him a 20 vol. Shakespeare as a testimonial of regard.

Wm. B. Morgan has been elected Professor of Mathematics and Astronomy in Earlham College, *vice* Eli Jay, resigned.

W. F. Warfle, formerly of Ladoga, the past year in the Hadley-Roberts Academy at Indianapolis, will be principal of the Frankfort high school next year.

Prof. Robert Kidd, the noted Indiana elocutionist, has recently been doing some acceptable work in Wheeling, W. Va. The papers compliment him highly.

P. L. McCreary is principal of Vincennes University, and not E. A. Bryan, as stated last month. Mr. Bryan is the teacher of Latin, Greek, and English Literature.

J. H. Ewbank, who has been for the past three years in charge of the school at Everton, has given up his place on account of ill health, and removed to Holton, Kansas.

C. W. Harvey is just closing his fifteenth year as superintendent of the Greensburg schools. Mr. Harvey has done good work and stands well as an educator in this state.

Eli Jay and his wife, Mahalah Jay, for the last 14 years members of the faculty of Earlham College, have tendered their resignations, to take effect at the close of the present school year. The college will lose the services of two faithful and efficient instructors.

Henry A. Ford, former editor of the *Northern Indiana Teacher*, has made a voluminous collection of the "Poems of History."

Timothy Wilson has accepted the principalship of Spiceland Academy for next year, and so will not be a candidate for re-appointment as superintendent of Henry county.

R. H. Harney, principal of the high school, has been promoted to the superintendency of the Lebanon schools for the coming year. Salary \$800—a cut from \$1200—a backward step.

D. M. Geeting will not be a candidate for re-appointment as superintendent of Daviess county, but does not propose to leave the school work. He would make a good superintendent of city schools.

A. D. Mohler, one of the leading teachers in the north-eastern part of the state, has recently become one of the proprietors of the *Huntington Herald*. The Journal wishes him success in his new enterprise.

W. F. L. Sanders has been elected superintendent of the Cambridge City schools. Mr. Sanders is a graduate of the State University. He has had about 16 years' experience in teaching, and holds a state license of the 1st class. He is the author of "The English Sentence," a work remarkable for its clearness and exhaustive treatment. Mr. Sanders is a clear-headed man, and the trustees of Cambridge City will not regret their choice.

GEMS OF THOUGHT.

We are shaped and fashioned by what we love.—*Goethe*.

If there is a virtue in the world at which we should aim it is cheerfulness.—*Bulwer Lytton*.

At the last day it will not be asked what we did or what we believed, but what we loved.—*Bernard*.

Worried and tormented into monotonous feebleness, the best part of life ground out of him in a mill of boys.—*Dickens*.

Man is a prism, through which pass the rays of God's light. It is not the prism that contains the beautiful rays, it is God; but without the prism we could not see the colored rays.

According to Oliver Wendell Holmes, every man is possessed of a triune individuality. 1. There is the real John, known only to his Maker. 2. There is John's ideal John, never the real one and often unlike him. 3. Thomas's ideal John, never the real John nor John's John, but often very unlike either.

By one's self is evil done, by one's self one suffers. By one's self evil is left undone, and by one's self one is purified. Purity and impurity belong to one's self; no one can purify another.—*Buddhist Scripture.*

"To possess the gift of helpfulness is to be mortgaged to all who need."

We get back our meet as we measure;
We can not do wrong and feel right:
Nor can we give pain and get pleasure,
For justice avenges each slight. [Alice Carey.

LIVE IT DOWN.

Has your life a bitter sorrow,
Live it down.
Think about a bright to-morrow—
Live it down.
You will find it never pays,
Just to sit wet-eyed and gaze
On the grave of vanished days,
Live it down.
Is disgrace your galling burden—
Live it down.
You can win a brave heart's guerdon,
Live it down.
Make your life so free from blame,
That the luster of your name
Shall hide all the olden shame—
Live it down.
Has your heart a secret trouble,
Live it down.
Do not grieve and make it double—
Live it down.
Do not water it with tears,
Do not feed it with your fears,
Do not nurse it thro' long years,
Live it down.
Have you made some sinful error—
Live it down.
Do not hide your face in terror,
Live it down.
Look the world square in the eyes,
Go ahead, as one who tries
To be honored ere he dies,
Live it down.

[Ella Wheeler.

"He who does not provide for his own house," says St. Paul, "is worse than an infidel"; and I think that he who provides only for his own house is just equal with an infidel.—*Dean Swift.*

There is no great or small in nature's plan,
Bulk is but fancy in the mind of man :
A raindrop is as wondrous as a star,
Near is not nearest, farthest is not far ;
And suns and planets in the vast serene
Are but as midges in the summer sheen,
Born in their season, and that live and die,
Creatures of time, lost in eternity. [*Charles Mackay.*]

Ours is the seed time. God alone
Beholds the end of what is sown ;
Beyond our vision, weak and dim,
The harvest time is laid with Him. [*Whittier.*]

Take what'er shall chance, though bad it be ;
Take it for good, and 'twill be good to thee.
[*Thomas Randolph.*]

POPULAR SCIENCE.

This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

HOW SLATE PENCILS ARE MADE.

Broken slate from the quarries is put into a mortar run by steam and pounded into small particles. Thence it goes into the hopper of a mill, which runs it into a bolting machine, such as is used in flouring mills, where bolted, the fine, almost impalpable flour it is that results being taken into a mixing-tub, where a small quantity of steatite flour manufactured in a similar manner is added, and the whole is then made into a stiff dough. This dough is thoroughly kneaded by passing it several times between iron rollers. Thence it is carried to a table, where it is made into charges—that is, short cylinders, four or five inches thick, and containing from eight to ten pounds each. Four of these are placed in a strong iron chamber or retort, with a changeable nozzle, so as to regulate the size of the pencil, and subjected to tremendous hydraulic pressure, under which the composition is pushed through the nozzle of a long cord like a slender snake sliding out of a hole, and passes over a sloping table slit at right angles with the cords to give passage, with a knife which cuts them into lengths. They are then laid on boards to dry, and after a few hours are removed to sheets of corrugated zinc, the cor-

rugations serving to prevent the pencils from warping during the process of baking, to which they are next subjected in a kiln, into which super-heated steam is introduced in pipes, the temperature being regulated according to the requirements of the articles exposed to its influence. From the kiln the articles go to the finishing and packing room, where the ends are thrust for a second under rapidly revolving emery wheels, and withdrawn neatly and smoothly pointed ready for use. They are then packed in pasteboard boxes, each containing 100 pencils; and these boxes, in turn, are packed for shipment in wooden boxes containing 100 each, or 10,000 pencils in a shipping box. Nearly all the work is done by boys, and the cost therefore is light.

One of the largest brains on record is that of an illiterate, not very intelligent mulatto, of Columbus, O., who recently died at the age of forty-five years, and whose case is reported by Dr. Haldeman, in the *Cincinnati Lancet*. His brain weighed 68½ ounces, or nearly five ounces more than the famous brain of Cuvier.

ELECTRICAL AND MECHANICAL.

The *Moniteur Industriel* says that electrical force is regularly installed as the propelling power of the trains on the three railroads from Lichterfeld to Spandau, Prussia; from Port Bush to Busa Mills, Ireland; and from Zandvoort to Kostverloren, Holland. Electrical railway lines are in construction from Wiesbaden to Neroberg, Prussia; at Zankerode, in Saxony; a subterranean and subfluvial road in London; and one in South Wales, the motive power for which is derived from a fall of water. Of lines projected are the urban railways of the cities of Milan and Turin; the Edison Company's projected line in the United States; and the South Austrian Company's line.

The telephone has proved a great convenience to the imperial family of Russia, Nihilist-besieged at Gatschina. It enables them to hear at will their favorite prima donna without exposing themselves to the deadly bomb, or forcing the singers to come to the bomb-proof palace. A wire has been run from Gatschina to the Marinsky Theatre, St. Petersburg, forty miles away, and over it are conveyed to the listening ears of imprisoned royalty all the music, vocal and instrumental, and the dialogue, and the popular applause also, of every opera performed there.—S. A. LATTIMORA, in *Our Continent*.

A NEW TELEGRAPH LINE.

A great ticking of telegraph instruments was heard at 49 Broadway yesterday afternoon. It was accompanied by a musical humming resembling the vibrations of an old-fashioned tuning-fork. The operators of the new Postal Telegraph Company were familiar-

izing themselves with their instruments. Six of them were sending dispatches to Cleveland simultaneously over the same wire. The musical vibrations were caused by the use of the harmonic system of telegraphy, each dispatch being sent on a distinctive note or sound. The ticking of the instruments were almost lost in the ticking of a dozen type writers, manipulated by as many charming young ladies. They were deciphering long slips covered with the characters of the Morse alphabet and printing the dispatches received.

Nor were these the only tickings heard in the room. Seven copper cylinders, about two feet long, and of the diameter of a stove-pipe were arranged against the south wall. A young lady sat near each cylinder ticking the key of a sounder. The sounder was connected with a pen which was fastened above the revolving cylinder. At each tap of the forefinger on the sounder the pen recorded on the cylinder in red ink a character of the Morse alphabet. Each cylinder will carry 1,200 words. When a message is recorded on the cylinder the pen is withdrawn and an electric stylus dropped on the cylinder at the beginning of the message in red ink. Steam power is then applied. The cylinder revolves with great rapidity, and in a minute the characters appear on a telegraphic slip of chemical paper at Cleveland, 800 miles away. The paper is wound in a roll the same as the strip in a stock indicator, and is ground out by hand in the same manner as an apple is pared by machinery. There were seven of these copper cylinders, and they could all be worked at once over the same wire. More than that, each could drop its dispatch at any station between here and Cleveland.

This is what is called the Leggo Automatic system of sending dispatches. The company claim that by it they can transmit 3,000 words per minute after the original dispatch has been transferred to the cylinder in Morse characters. For instance, a dispatch containing 3,000 words is sent to the office for transmission to a given point. It is cut into seven parts, or "takes," and distributed among the operators, the same as a printer distributes copy among his type-setters. Each operator transfers his "take" to a cylinder. When this is done the seven cylinders are set in motion, and the 3,000 words are transferred simultaneously over the same wire. Thus the company has combined and perfected both the automatic and harmonic systems of telegraphy, discarding entirely the perforations that marked the introduction of the automatic system. It claims that it can send eight and receive eight dispatches at the same time over the same wire. By the distributions of its cylinders it claims that it can send dispatches direct to their destination from any city office without transmitting them to a central station. By the use of the harmonic system the wires can not be tapped between the sending and receiving stations. Under the Leggo system, messages can be transmit-

ted automatically on a single wire, received automatically at the end of a circuit, and re-transmitted automatically at the same speed over any number of circuits, all from a single setting on a cylinder.

The two wires in use between here and Cleveland are steel, heavily insulated in copper. They each contain over 500 pounds of copper to the mile. Each wire will sustain a weight of 2,500 pounds. The poles are thirty feet high, and of unusual size and strength. There are forty of them to the mile. It is claimed that the wires are of such supreme conductivity that the electric current on them will not be disturbed by storms and atmospheric changes. The resistance of the electric current on these wires is only 17 ohms. It is averred that this brings Chicago, telegraphically, as near New York as Philadelphia, and San Francisco as near as Cleveland, compared with the best wires now in use.—*New York Sun*.

BOTANICAL.

Hog cholera is believed by Prof. T. J. Burritt, of Champaign, Ill., to be due to the presence in the blood of a small plant, *micrococcus sui*. This little plant is composed of globular cells, either single or in pairs, rarely in chains. 280,000 of these "plants" put end to end would measure only an inch in length. He also finds a larger species, *micrococcus gallicidus*, in the blood of chickens, .00002 of an inch in length. There is some compensation in the fact that Prof. S. A. Forbes finds a parasitic plant in the stomach of the poor little chinch bug, causing this grain destroyer untold miseries, and causing such destruction that in some localities the hard-up collector "can scarcely find a chinch bug for his cabinet." The chinch bug has the blissful name of *blissus leucopterus*, although few of them know it; 178,000-inch-long-gastralgia-producer, is known as *micrococcus insectorum*. We are bound to keep up in the Mississippi Valley with Koch, Pasteur, Tyndall and the rest. But how shall we kill 'em—the little plants? that's the question.

ZOOLOGICAL.

The three species of clothes moth are European importations. We have none native in the United States. But our bed bug is "born to the soil," and according to Dr. E. Cones is often brought to new buildings on the bodies of bats, rather than by tramps, domestics, or second-hand furniture. But it is all the same, once they are in a house.

During a short stay at Pensacola and Galveston, Prof. Jordan collected 129 species of marine fishes, of which 16 are new species.—*Am. Nat. for March*.

A milk-white raven, with pink eyes and red legs, is drawing large crowds at the Berlin Aquarium. All birds in the aviary fear and shun

this curious albino. Prof. Samuel Lockwood, of Jersey, once had a pet white black-bird, which lived in domestication ten years. This snow-white raven, taken from a brood of coal-black brothers and sisters, is one of the lions of the German capital.

BOOK TABLE.

The *Agricultural Press* is the name of a new agricultural paper just started at Indianapolis. Cyrus T. Nixon, editor.

Prof. Kidd has revised his *Popular Elocution*, and it is re-issued in new dress by its former publishers, Van Antwerp, Bragg & Co., of Cincinnati.

The *North Carolina Teacher*, Vol 1, No. 1, published at Raleigh, is at hand. It is printed on extra fine tinted paper, and is gotten up with excellent taste. It is in pamphlet form. The contents are of a high grade.

History of American Politics. By Prof. W. R. Houghton, of the State University, and published by F. T. McNeely & Co., of Indianapolis, is a book of great value to one wishing to know the political history of the country. A further notice will be given soon.

A New Political Economy. By John M. Gregory, LL. D. Cincinnati: Van Antwerp, Bragg & Co.

The author is ex-State Supt. of Michigan, and ex-President of the Illinois Industrial University, and one of the leading educators of the country. The book is the result of teaching the subject, and is as practical as such a work can be made. The subject of course is an old one, and has been discussed by the ablest minds of the world, and yet advancing civilization and new conditions in society demand a restatement and a modification of the great principles underlying it. The great problem of the "Wants, Work, and Wealth" of mankind can never be settled, but must always be in a state of "being settled. The "science of industries" is just at this time attracting unusual attention, and there is a growing demand for popular instruction on the subject. This book covers the ground fully, but concisely and clearly, and is specially adapted to use in high schools and colleges. No better book on the subject has been offered to the public.

A Latin Grammar. By Thomas Chase, LL. D., President of Harvard College. Philadelphia: Eldredge & Bro. Price, \$1.35; to teachers, for examination, \$1.00.

This new Latin Grammar, like all books from the pen of President Chase, is good. In the declensions and conjugations the inflectional

endings are given in large type, which helps to impress them more distinctly upon the mind of the learner. Full lists of nouns wanting some of their cases and of nouns whose meaning in the plural is different from that in the singular, are given under the head of declensions. The list of adjectives, irregularly compared, is also complete. In syntax the statement of facts is clear and concise, their arrangement logical, and the student is not bewildered by a *needless* multiplicity of rules and definitions. The sentences, given in illustration of the rules, are practical and to the point. The book has many other good features, and after a careful examination we do not hesitate to recommend it to teachers and students of Latin as a Grammar that is equal and in many respects superior to the best now in use.

BUSINESS NOTICES.

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Among recent decided successes in the book line is THE TEACHERS' AND STUDENTS' LIBRARY. The numerous outlines, concise, scholarly text, abundant questions, the methods of teaching, etc., etc., combine to make this the most popular book of the day. It has received nothing but commendation from the press and educators all over the country. Its price, \$3.00 for one royal octavo volume, makes it the cheapest book out. T. S. Denison, of Chicago, is the publisher.

THE STYLOGRAPHIC PEN is one of the necessities of our modern civilization. If Hood's song had been "Dip, dip, dip," instead of "Stitch, stitch, stitch," it would have lost its text at the hands of Mr. Livermore, who has given his age this perfection of pen, penholder, and case, and ink, all in one, handsome, and always at hand and ready for use. The inventor has put some new improvements into it, and now what remains but for every scribe and letter writer to find it on his desk. Ink, filler and cleaner, all go with it. And to crown all, the price has been reduced to \$2. Send that amount to the sole agent, Mr. Louis E. Dunlap, 290 Washington St., Boston, Mass., and the return mail will bring you this most perfect pen.—*Contributor, Boston.*

HOW TO GO EAST.—Many teachers will doubtless make a trip to the Atlantic coast during the coming summer vacation. It is certainly a delightful thing to do. In making such a trip it is always desirable to take a route affording the greatest variety of scenery. The writer has gone East by all the principal lines, and for fine scenery recommends the "Pan-Pandle" route. The Pan-Handle proper runs to Pittsburgh, and there makes close connection with the Pennsylvania: in fact these are now run as one road. A person can take a through car from Indianapolis to New York. By this route one passes through Columbus, Ohio; Pittsburgh, Harrisburgh, and Lancaster, Penn.; Trenton and Newark, N. J.; and in crossing the Alleghany Mountains witnesses much grand scenery. The world-renowned Horse Shoe Bend is on this route; the "Pack-Saddle Bend," also, which is almost equal in beauty and grandeur.

Teachers going to the National Association at Saratoga can go by this route and take in the places named above, and also New York City and the Hudson River, with but little additional expense.

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INDIANA " SCHOOL JOURNAL.

Vol. XXVIII.

JULY, 1883.

No. 7.

BUCKEYE VERSUS HOOSIER.

J. FRAISE RICHARD.

MUCH of our knowledge is acquired through comparison and contrast, by noting the semblances and differences of things. Plutarch, in his celebrated biographies, uses these processes extensively. The pithy proverbs of Solomon owe much of their rich value to the striking light in which objects stand toward one another. A few examples will serve to illustrate this principle. Says Solomon: "Righteousness exalteth a nation, but sin is a reproach to any people." How beautiful the contrast between righteousness and sin, as personified by the wise king. Again: "As cold water to a thirsty soul, so is good news from a far country." The resemblance between cold water to a thirsty soul and good news from a far country is the avidity with which each is received.

It is my object in this paper briefly to compare Ohio and Indiana, especially as to their school systems, in order that the excellencies and defects of each state may be seen. This comparison is justified by the fact that in all the elements of their developments, they have been closely identified, more so, perhaps, than any other two western states. They had common cause against the treachery, revenge, and massacre by the red man. They endured common hardships in sweeping away the dense forests that everywhere covered the land, and in estab-

lishing permanent settlements. They had a common climate, and consequently common diseases to conquer in lifting the forest-wilds to their present advanced agricultural and social condition. They have had common difficulties to contend against, and common enemies to overcome. Bounded on the south by Mason and Dixon's line, both were, in former times, constantly disturbed by the annoyances and complications of fugitives from slave masters. Both states have had to solve the problems resulting from the presence of two races in the same community. Through the Mexican war and latterly during the great rebellion, their soldiers met a common enemy and stood side by side in the most trying ordeals. Between these soldiers the most intimate relations always existed. Similar secret organizations, the enemy of the general government, existed in both states, and for a time greatly imperilled the perpetuity of the nation. Both states were singularly blessed, during the dark days of the rebellion, with chief executive officers who seem to have been raised up specially for the times that tried men's souls. The Mortons of Indiana and the Tods and Broughs of Ohio were the true patriots on whom both the national executive and the boys in blue at the front could rely with implicit confidence. In the solving of social and educational problems, the states have ever been true yoke-fellows.

HISTORY.

Ohio.—This state was first discovered by La Salle, about 1680. The first permanent settlement was made at Marietta, on the 7th day of April, 1788. It was, according to some historians, admitted into the Union as the seventeenth state, on November 29th, 1802; according to others, February 19th, 1803. This discrepancy is accounted for by the statement that application for admission was made on the first date, but the consummation was made on the second. It was a part of the Northwest Territory, but never had a distinct territorial existence. From 1800 to 1810 the seat of government was at Chillicothe; from 1810 to 1812 at Zanesville; and from 1812 to 1816 again at Chillicothe. Since 1816 the capital has been at Columbus. The present constitution was completed March 10th, 1851, and ratified by the people

June 17th, 1851. A new constitution, considered by many superior to the present one, was made in 1873, but rejected by the people in 1874.

Indiana.—The state was settled at Vincennes in 1702, or according to the majority of writers in 1730, by a body of French Canadians. In 1763 the territory was ceded to the British, and by them to the United States in the treaty of 1783. A territorial government was organized July 4th, 1800. The territorial capital continued at Vincennes till 1813, when it was taken to Corydon. It remained at the latter place till January 1st, 1825, on which day the public offices were removed to Indianapolis, the present capital. The first constitution was adopted June 29th, 1816; the state was admitted into the Union December 11th, 1816.

STATISTICS.

Ohio.—It was the fourth state admitted into the Union under the Federal Constitution, and is the third in population, the population in 1880 being 3,197,794. Its greatest length from east to west is 225 miles, and its greatest breadth north to south, 200 miles. Its area is 39,964 square miles, or 25,576,960 acres, and has eighty-eight (88) counties. Number of youth of school age in September, 1881, was 1,063,337. Number of school districts, 2,037; number of township sub-districts, 10,923. Number of teachers necessary to supply schools, 16,999; number actually employed, 23,970. Average number of weeks schools were in session, 31. Number of pupils enrolled in the schools, 744,758; average daily attendance, 468,141. Number of school officers, 51,911. Average monthly wages of teachers in township district schools—gentlemen \$35.00; ladies, \$25.00. Average monthly wages of teachers in city, village, and special district primary schools—gentlemen, \$46.00; ladies, \$34.00. Number of applications for teachers' certificates—gentlemen, 19,361; ladies, 17,028. Number of applications rejected—gentlemen, 6,283; ladies, 6,233—total, 12,516.

Total number of 36 months' certificates	296
Total number of 24 months' certificates	1086
Total number of 18 months' certificates	2749

Total number of 12 months' certificates	9684
Total number of 6 months' certificates	10038

Grand total 23853

Indiana.—Indiana was the sixth state admitted under the constitution. The population at the last census was 1,978,853. Its greatest length from north to south is 276 miles, and average breadth from east to west 140 miles. Its area is 33,809 square miles, or 21,637,760 acres, and has ninety-two (92) counties. The number of youth of school age in April, 1881, was 714,343. Number of school districts, 9,323. These are the same as the sub-districts in Ohio, and do not include town and city corporations. Number of teachers necessary to supply schools, 13,292. Number actually employed, 13,253. Average number of weeks schools were in session, 26.7. Number of pupils enrolled, 495,900. Average daily attendance, 306,301.

Number of school officers—

Township Trustees	1010
Town "	795
District Directors	9323
State Board	8
County Superintendents	92

Total 11228

Average monthly wages of teachers in county districts—male, \$38.60; female, \$34.80. Average monthly wages in towns—males, \$57.60; females, \$37.20. Number of applicants for teachers' license—male, 8092; female, 6452. Total, 14544. Number of applicants for license rejected, 6876.

Total number of 24 months' licenses	1946
Total number of 18 months' licenses	2827
Total number of 12 months' licenses	4929
Total number of 6 months' licenses	8839

Grand total 18541

By a law passed in 1882, the 6 months' license is issued as a trial license, but not renewable; also, if a candidate has a 24 months' license and passes for 36 months, he may receive a professional license for 8 years, which is good throughout the state.

ANALYSIS OF SCHOOL SYSTEMS.

Ohio.—The Encyclopedia of Education very truly says: "The germ of public education in Ohio is to be found in the ordinance of July 13th, 1787, enacted to provide a territorial government for the region northwest of the Ohio river. At that time, an association of people of New England—chiefly soldiers of the Revolution, organized as the Ohio Company of Associates, was negotiating with Congress for a large tract of land in the West. Gen. Rufus Putnam was the acknowledged leader of the movement, and the Rev. Manasseh Cutler, LL. D., of Massachusetts, was the agent to purchase the land. The latter was a man of broad and liberal culture; and, at the time the ordinance was framed, was consulted as to its provisions. It is believed that to him more than to any other person are to be attributed those clauses which have made the ordinance so famous and useful; the prohibition of slavery, and the declaration that religion, morality, and knowledge being necessary to good government and to the happiness of mankind, schools and the means of education shall be forever encouraged. By the contract afterward signed by Dr. Cutler and Winthrop Sargent, on the part of the Ohio Company, and by the Board of Treasury, October, 1787, it was stipulated that lot or section number sixteen in each township should be set apart for the maintenance of schools, and also that two complete townships should be given perpetually for the purposes of a university." * * * * "Congress gave another township of land for a university, and afterward gave the 16th section in each township of the state, or an area equal to this, for the support of common schools. Thus one thirty-sixth part of all the land of the state was devoted to common schools, besides the three townships for universities."

1. *State Officers.* The leading educational officer is the (1) *State Commissioner of Common Schools*, who is elected by the people for three years, and receives a salary of \$2000 per annum, together with expenses. His duties are: to prepare an annual report giving a true exhibit of the schools of the state; to make suitable recommendations to the Legislature concerning school matters; to visit the several judicial districts of the state annually,

"superintending and encouraging teachers' institutes, conferring with boards of education and other school officers, consulting teachers, visiting schools, and delivering lectures on topics calculated to subserve popular education." (2) *A State Board of Examiners*, consisting of three members, is appointed by the State Commissioner, and is empowered to issue life certificates to properly accredited persons.

2. *County Officers.* The officers in any way connected with the management of schools are: (1) The *Auditor*, who reports the condition of school property in the county and the school funds. (2) The *Probate Judge*, who appoints the members of the Board of County Examiners. (3) *Board of Examiners*, composed of three members, and appointed by the Probate Judge, to examine all teachers in the county. They have neither supervisory nor executive power.

3. *Township Officers.* Each civil township is a school district. The law, however, recognizes the following distinct kinds of districts: (1) City districts of the first class; (2) City districts of the second class; (3) Village districts; (4) Special districts; (5) Township districts. These townships are further divided into sub-districts, which are controlled by officers known as *directors*. These three local directors in the various sub-districts employ teachers, secure school sites, provide fuel, and furnish all necessary supplies. The *Township Board of Education*, consisting of the township clerk and the clerks of the different local boards chosen at the April election, holds the title to all school property and authorizes the adoption or change of all text-books. It grants authority for the erection and equipment of new school buildings. (2) *City, Village, and Special Districts* have special boards of education separate and distinct from the township boards. These boards are usually in multiples of three, and have powers similar to the township boards. They employ teachers and superintendents for their respective districts.

The County and State Examiners and the State School Commissioner are the only school officers that directly receive any compensation for their services. The schools of towns and cities are, as a rule, under excellent management. Superintendents of

ability are employed to prepare courses of study, and to see that those courses are wisely followed. A proper gradation of pupils is preserved, and teachers are given the aid and encouragement necessary to discharge their duties successfully. In the country school no such oversight prevails. Each sub-district is, to all intents and purposes, a separate and independent organization, and responsible to no higher power. Each township is practically independent of every other township in the county, and each county independent of every other in the state. No uniformity of course of study; no responsibility for the character of work done; no competent head from whom counsel and inspiration may be received; no suitable records kept and reports rendered; no graduation on completion of a prescribed course of work; in short, a systematic want of system in the administration of the affairs of the country schools,—such is too often the picture presented in this enterprising state—this modern mother of presidents, generals, and statesmen.

The educational agencies of the state are the public schools, the academy, the independent normal school, the denominational college, the agricultural college, and the state and the denominational university. No state aid has been given to normal schools. In addition to the foregoing, the county teachers' institute and voluntary associations have done much to arouse educational zeal, and supply deficiencies in other respects.

Indiana.—This state occupies a front place in the list of educational states. By the constitution adopted in 1816 the general diffusion of learning and knowledge through a community was declared to be essential to the preservation of a free government; but by the new constitution of 1851, the General Assembly was specifically charged "to encourage, by all suitable means, moral, intellectual, scientific, and agricultural improvement, and to provide by law for a general and uniform system of common schools, wherein tuition shall be without charge and equally open to all." The act which aimed to realize these provisions of the constitution was passed June 14th, 1852, but did not go into practical operation until the first Monday of April, 1853.

The educational forces of the state are thus distributed:

1. *The State Superintendent of Public Instruction* is the official head of the system. He is elected at the November polls for two years, and receives an annual salary of \$2500, together with \$600 for general expenses and \$1800 for clerk hire. He is charged with the general administration of school affairs in the state, and is expected to render an opinion in writing on matters of controversy arising among his subordinates. He is expected to attend institutes throughout the state, and to inspect the books of county auditors relative to the proper distribution of school funds.

2. *State Board of Education.* This consists of the State Superintendent, who is *ex-officio* president; the Governor, the presidents of the State University, Purdue University, and State Normal School, and the superintendents of the three largest cities, which are Indianapolis, Evansville, and Fort Wayne. This board performs several important duties, viz: (1) It appoints the trustees of the State University. (2) It prepares the list of questions used in all the county examinations throughout the state. (3) It grants state certificates to competent persons.

3. *County Superintendent.* This officer has general control of the schools of the county. He is elected by the board of township school trustees, on the first Monday in June, to serve for a period of two years. His compensation is \$4.00 per day for actual service. He is also supplied with an office and the necessary stationery. His duties are as follows: (1) To have general supervision of the schools of the county. (2) To carry out the orders of the County and State Boards of Education and of the State Superintendent. (3) To examine honestly and fairly all applicants for license to teach. (4) To try appeals concerning school matters coming from trustees. (5) To make school reports to County Auditor and State Superintendent. (6) To hold a county institute each year. (7) To preside at least once a year at township institutes. (8) To keep record of all his proceedings. (9) To visit all the schools of the county at least once

a year, and to note progress and make suggestions. (10) To do everything in his power to advance the standard of teaching.

4. *County Board of Education.* This body is made up of the township trustees and county superintendent, *ex-officio* chairman. It prescribes courses of study for the schools of the county, establishes rules and regulations for the government of schools, prescribes a uniform series of text books, and through its executive officer, the superintendent, controls the general school interests of the county.

5. *Township Trustees.* Every township has a school officer known as trustee, who is the educational manager for the township. He is elected by the people on the first Monday of April, for a period of two years, and receives \$2.00 per day for actual services rendered. He is eligible for two terms only. His duties succinctly stated are: (1) He receives and disburses all school funds for the township. (2) He employs all teachers. (3) He provides all school supplies, such as furniture, maps, charts, globes, etc. (4) He acts, as already stated, in selecting county superintendent, and establishing courses of study and a uniform system of text-books. (5) He takes the enumeration of school children and reports to the county superintendent. The functions of this office are exceedingly important to the proper management of schools, and hence none but efficient men should be chosen.

6. *School Director.* Every school district is furnished with one nominal officer known as director. He is elected by the people on the first Saturday in October, for the period of one year. He receives no pay but empty honor. His duties are simple, being: (1) To act as chairman of all citizens' meetings for school purposes, and to record their decisions, reporting to the township trustee. (2) To take charge of and repair school property, and to provide the necessary fuel for school and report cost to trustee. (3) To inspect the schools from time to time, and if necessary to exclude any refractory pupil therefrom.

Every incorporated town and city has its board of three school trustees, elected by the town council and trustees, who have

charge of the management of the schools of said corporation. These trustees employ all teachers and the superintendent, and receive and disburse their own money. These trustees are paid for their services out of the special school fund,—a wise provision, since men ought not to be expected to do such important service without proper compensation.

The general educational agencies of the state are the public school, the academy, the independent normal school, the state normal school, the denominational college and university, and the state university. Provision is made for free admission from chartered high schools into the state university, and the entrance into the state normal school is also free of tuition.

Township and county institutes, district associations and state educational conventions have much to do in maintaining a proper enthusiasm among the people.

CLOSING COMPARISON AND REMARKS.

1. Ohio has a larger institute fund than Indiana has. The money specially obtained from the county commissioners, together with the proceeds of an examination fee of fifty cents from every applicant for a teacher's certificate, constitutes a fund varying from \$100 to \$300 per county. This sum, however, is often increased by voluntary assessment.

2. Ohio has no uniform system of institute instruction. Every county's managers arrange a programme for themselves, or leave the matter wholly to the discretion of the instructors. No definite uniform results can be expected under the circumstances. In Indiana an institute manual of subjects and methods is prepared by the state board of education, and this becomes a guide throughout the state. The same general subjects are discussed in every institute. The work thus mapped out becomes a uniform lesson, similar to those used in our Sunday-schools.

3. In Ohio every county board of examiners prepares its own list of questions for the examination of teachers. These questions may be good or indifferent, according to the competency of the examiners. In Indiana the examination questions are prepared by the state board of education, and are uniform

throughout the state. Every applicant in the state has the same test on the same day.

4. In Ohio the schools of the township and of the county have no responsible legal head. They are virtually independent, the only bond of union and communion being the instruction received at the county institutes and associations, and the county pride that necessarily takes possession of people. In Indiana the schools of the township and county are both under recognized supervision.

5. As a result of this condition of things, no uniform course of study, no gradation of work, no graduation of successful students, and no uniform system of text-books and instruction characterizes the schools of an Ohio county. In Indiana such condition of things as a rule does not exist. Any failure is the exception, not the rule.

6. The town and city schools of Ohio are, generally, equal to any found in the whole country. They are provided with good buildings, competent teachers, and successful superintendents. The people supply them freely with means. The schools of Indiana, however good they may be, can not and do not excel them.

7. The great need of Ohio is a reorganization of her common schools by the abolition of the sub-district system and the substitution of the township system; the establishment of county supervision; the building up of one or more state normal schools, and the placing of the teacher's work upon a more scientific and remunerative basis. To accomplish these results will require much missionary work. The secular papers and the stumps must lend their aid to the efforts put forth in school journals and teachers' conventions.

In conclusion, I desire to express my obligations for valuable aid in the preparation of this article, to my friends, Hon. D. F. De Wolf, State School Commissioner of Ohio; Hon. John M. Bloss, *ex-State Superintendent* of Indiana; and to county Supts. A. H. Morris and S. P. Neidigh, of Noblesville and Nashville, Indiana, respectively.

SILENT READING.

✓
 GEORGE F. BASS.

“*Longevous Sir* :—The day sequacious to the vesper on which I effectuated in a certain cabaret an exsciccation of my habiliments by torrefaction, was not very inservient to the progress of a pedestrian emigrant.”—*Altisonant Letters*.

Silent Reader, have you read this? Why not? What will you do first to be able to *read* it? Learn the meaning of the words used. If you have not read this, you find yourself just where you may frequently find your pupils,—more frequently, perhaps, than you may suppose.

If you know the “derivation and composition” of these words you soon may reach the meaning without other assistance. Suppose you do not know them: then you must get assistance from some person or the dictionary. You, reader, will take the dictionary because you have learned to use it and to apply the definitions found in it. Common sense then, would say teach your pupils to do this. Teach them first how to find the words. You may think they know *how* to do this, but if you will watch them hunt for a word you will see they do not know how. To illustrate, take the word *preventive*. They will find the column headed *pre*, and immediately pass down the column in search of the word; not finding it they take the next, and so on until they have found the word. In the dictionary before me (Webster's High School), they would have a chase through eight columns.

Of course a teacher knows that when he found *pre* he should have looked for *prev*. The first word in the first column is *prec*, the same in the 2d, the 3d is *pred*, the 4th is *preg*, the 5th *prem*, the 6th *prep*, the 7th *pres*, the 8th *pret*, the 9th *previ*. As we wish *prev* we know, since *e* comes before *i*, that our word must be in the 8th column. It is a great waste of time to look elsewhere for it.

After having found the definition of the word the pupil is frequently in worse condition than before. Take the word *bark*. The definitions given are, “rind of a tree; the noise made by a

dog; to strip of bark; to make the noise of a dog; a ship with three masts, without a mizzen top-mast."

Pupils often take the first definition, especially when they have been merely *told* to learn the meaning of certain words, and that they can learn this from the dictionary. Suppose they had been studying the following:

"And the heavy night hung dark,
The hills and waters o'er,
When a band of exiles moored their bark
On the wild New England shore."

The first definition would make nonsense; so with all save the last. You are perhaps ready to say that any one with any common sense would know which definition to use. True. But it seems that something has made many pupils leave their common sense at home when they come to school. They put on a school-look, use a school-voice, a school-walk, and school-sense. It is common to hear the expression, "you act like a school-boy" applied to a man who does things foolishly. The teacher then should make it his business to appeal to a pupil's common sense rather than to rules and definitions—these are only useful when applied with common sense.

The pupil to be able to use the proper definition of the word referred to for illustration must ask himself the following questions and find proper answers to them: What does *moored* mean? What are exiles? What is a shore? Perhaps others may be needed. If the pupil can not thus question himself, here is work for the teacher. After having these questions answered the pupil will readily see that a ship is meant in this use of the word.

If teachers will turn their thoughts inward occasionally—frequently—and observe how they study a lesson, they will be able to lead a pupil to study correctly.

In the selection quoted from, it is necessary to know something of figurative language. It is not necessary to know the names of the figures, but it is certainly very necessary to know figurative language and how to interpret it.

"There was woman's fearless eye,
Lit by her deep love's truth;
There was manhood's brow serenely high,
And the fiery heart of youth."

Ask what kind of people were in this band, and tell the pupil that he may learn by reading this and the preceding stanza. He will be able to describe some if not all. If he is not, call attention to each phrase and ask him to try to decide what is meant. If he still can not, tell him what is meant and how you know it.

Still another thing is needed to thoroughly understand and appreciate this selection—"The Landing of the Pilgrim Fathers," by Mrs. Hemans. The historical facts related to it. Pupils should be taught where and how to get these. If no reference-books can be had, the teacher should give these facts to the class.

After all this has been done the pupils are ready to read orally. To do this effectually they must have a clear conception of the meaning of each sentence. The oral reading is a good test of this.

"What sought they thus afar?
Bright jewels of the mine?
The wealth of seas, the spoils of war?
They sought a faith's pure shrine."

Suppose he reads the first line as a question, and the other three as answers: it is plain he has not a clear conception of each sentence. Do not tell him to keep his voice up at the close of first three lines and let it fall at close of last line. You treat him as a hand organ if you do. Set him correctly and turn the crank and he plays a pretty tune.

Question him to think as you thought when you decided his reading was wrong. "Is the first line a question?" "Yes." "Is the second line an answer to it?" "No." "Does the third line answer the question?" "No." "The fourth?" "Yes." "What are the first three lines?" "Questions."

"Read again." "This takes time," you say. Yes, but it is time well spent.

SHOULD PINS HAVE POINTS? AND IF SO, WHERE?

THE chairman announces the first topic for the consideration of the convention: "*Should Pins have Points? And if so, Where?*" He then calls on Dr. Standby to open the discussion.

The Doctor announces that, in order to give anything like a clear idea of the subject, he must go back to the creation and trace the subject down to the present time. The need of pins was first felt when it became necessary for Eve to fasten together fig leaves for aprons. He was strongly of the opinion that *pins* of some kind were actually used on that occasion, and that the word translated *sewed*, should have been rendered *pinned*. Now the best and most natural substance for pins in that primitive age would be the thorn, and Swineskin in his late travels in the East had actually discovered a species of thorn well adapted to this use. *But thorns have points, and these points are always on the little end.* Here, then, is an excellent precedent. He then traced the history of pins through all nations, showing that some excellent specimens had been found in the stomach of an Egyptian mummy over four thousand years old, and gave a long array of statistics showing the number of pins used annually.

The next speaker was Professor Sharp, from Thorntown. He agreed most fully with the learned gentleman who had just taken his seat. It could be shown that the most highly civilized nations everywhere are the ones who use the most pins, and travelers have affirmed that the most savage nations use no pins at all. It must, therefore, be evident that the only thing necessary to civilize a nation is to supply them plentifully with pins. But as he couldn't see much point to pins without points, he thought they should have points somewhere. It had been quite common, as his predecessor remarked, to have the points on the little end; but it seemed to him it would be less dangerous to children if they were placed on the big end. The fact that our fathers had seemed to favor the little end is no reason why we should.

The next speaker was the agent of the great Button House—a rival of the great Pin-making Company. While he was free to admit that there was some point to the arguments of the gentlemen who had preceded him, he could not agree with them in their conclusions. Pins, he said, were extremely dangerous, both to the child's physical and moral nature, and should not be tolerated. Nine-tenths of all the disorder created in the school-room is directly attributable to their use. They induce boys to

cut holes through the backs of seats that they may wake up their neighbors, and the damage done to clothing by having it pinned fast to the seat is enormous. He showed how by bending a pin in a certain shape, it may be placed on a seat so that its point will stand upward. He had known cases where even teachers themselves had sat down on these relics of barbarism. They awaken the very lowest passions of a boy's nature, for they tempt him to impale the poor flies that happen to be on his desk, and they are a hundred times more temptation to gamble than cards, dice, or horse racing! What teacher of our youth has not detected them playing the demoralizing game of *heads or points*? All this is due to the presence of the pin. Let every teacher, then, who does not wish to see his pupils grow up to be savages and gamblers, prohibit their use among his scholars. Statistics show, he would further say, that more than 93 per cent. of all the mischief resulting from pins is attributable to their *points*. This is wholly due to having the point on the *end*; placing it on the large end, as had been suggested, would hardly remedy the matter, as the pin would be as far-reaching in its evil results then as now, though placing it on the large end would probably have a tendency to prevent the game of heads and points. If we must have pins with points, let us have the points in the *middle*.

The last gentleman sat down amidst thundering applause, during which half a dozen gentlemen sprang to their feet. The President recognized Prof. Small, of the Hentown College. He was surprised to hear so many learned gentlemen make fools of themselves. They must know that a *point has position only*. Now, that which has position without length, breadth, or thickness, can do no possible harm to any one. More than this, the point can not be confined to either end nor to the middle—the entire surface must of necessity be covered with points.

Prof. Cool then rose and offered the following resolution as a compromise, which was unanimously adopted:

Resolved, That we recognize the importance of pins as a valuable aid in our work, but think the position of the point may safely be left to the judgment of the teacher.

EDUCATIONAL NUGGETS.

[The following *gems* are from a lecture recently delivered by Prof. W. A. Venable, Principal of Chickering Academy, Cincinnati.]

"It is not easy," he says, "to learn to think; nor is it easy to think after learning. We are bound down by many cords of usage and ropes of authority; and it takes force and courage to break the bonds—to think in regard to education."

"Many regard the speculative philosophy of education as mere fog and delusion. There is much fog and delusion brooding over the subject; but the solid land of true science must be somewhere beyond the mist. Before we can safely run the train of right method along the track of practice, the head-light of theory must shine into the opening way."

"You can no more think for your pupil than you can digest food for him. The mind is solitary in its real achievements. We must work out our intellectual salvation alone. Teachers can order the 'environment,' but not do the vital work of another spirit."

Again he says: "Not the studies, but the study, makes the scholar." And again: "I do not believe in fitting boys for college if that fitting unfits them for life. The one fitting should be the other."

THE FORCE OF HEREDITY.

"You (teachers) are all your ancestors, including the Old Adam. Judge your pupil in the light of his heredity. The perfect work of education can not be accomplished except in the individual who comes of a stock cultivated for generations. Training your pupil, you may be training his great grand son. Infinite are the reaches of the school-master.

Stupidity, stolidity, inaptitude for special studies, vicious tendencies, are to be regarded as chronic diseases—the pupil may slowly be cured.

Many teachers of morality destroy the effect of judicious counsel by too much talk, as a chemical precipitate is re-dissolved in an excess of the precipitating agent.

Take care of the block-heads and the heads will take care of themselves.

All schooling in school should be supplemented and tested by schooling out of school.

The school must recognize its constant vital connection with the world around. Every teacher's desk should be in sight of the great facts of the times in which we live. Boys are men, girls are women, *to-morrow*.

Like the ancients, we must teach virtue as well as smartness. No good education can be based on mere intellectuality.

Bain is wrong in assuming that affection can play but a small part in teaching. Human love and sympathy play the greatest part in early training. They play the greatest part even in a class in mental arithmetic."

He thinks the educational philosophy and practice of the times is too materialistic. He declares that we neglect political education in our schools. Every boy and girl should be taught the elements of politics and economics; and especially, in these times, should the young be inspired with a pure patriotism and a religious devotion to the duties of citizenship. Educational theory and practice should proceed from the faith that there is a God at the center of the universe, and a soul at the center of man.

A L A S K A .

THE vast extent of Alaska is very little known. Its length from north to south is as great as the distance from Maine to Florida, and its breadth from its eastern boundary to the end of the Aleutian Islands is equal to the distance from Washington to California. The farthest of these islands is as far west of San Francisco as Maine is east of that city. The area of the territory is nearly one-sixth of the entire area of the United States. If its coast were extended in a straight line, it would belt the globe, and its mountains are the highest in the United States.

The chief resource of the territory is its seal-fur fisheries, which furnish nearly all the seal skins used in the markets of the world, and have paid a revenue into the United States Treasury of over three million dollars since January, 1871.

The other resources are fish, minerals, and petroleum. Alaska is said to be the great reserve lumber region of the United States. When the forests of Maine, Michigan, Wisconsin and Minnesota have been denuded, a use will be found for the thousands of miles of yellow cedar, white spruce, hemlock, and balsam fir which cover the south-eastern section of Alaska.

The climate varies in different parts of the territory. At Fort Yukon the thermometer often rises above one hundred degrees in summer, and sinks as low as seventy degrees below zero in winter. But the winter climate of south-eastern Alaska, for the past forty-five years, has been the average winter climate of Kentucky, and the average winter climate of Minnesota. The population includes about one thousand five hundred whites, mainly traders and miners. The natives number thirty-one thousand three hundred and eighty-six. About 9,000 of these are claimed by the Greek Church; and but little has been done by the United States for the education of any part of the population.—*Youth's Companion*.

THOROUGH WORK.—It is thorough work that is wanted in this world—thorough and through work; and thorough and through character also. When the character can be claimed for any good person, or for any good thing, nothing better could be said for it. Even the simplest and commonest minds recognize the truth. Near the head of State street, in Boston, an enterprising boot-black has shown his confidence in the principle involved by announcing on his play-card:

.....
: A *Shiney* Shine, :
: 5 Cents. :
.....

And there is no surplusage in his announcement. The need of the hour is manly men and womanly women, faithful faithfulness, honest honesty, truthful truthfulness, orderly order, thoughtful thoughtfulness, generous generosity, consecrated consecration, and everything in that measure, whether the cost involved is only five cents or the soul's salvation. Unless you can give a *shiney* shine you are not really competent to fill a boot-black's place efficiently.—*S. S. Times*.

DEPARTMENT OF PEDAGOGY.

This Department is conducted by Gzo. P. Brown, President State Normal School.

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ANNOUNCEMENT.

IN this number are begun two series of papers by Prof. Parsons and Prof. Sandison, which will prove of great practical value to the readers of the Journal who are teachers. Mr. Parsons will make a thorough discussion of the Grammar and Composition work adapted to the common school, and Mr. Sandison, after three or four papers on the study of words, will proceed with an elaborate presentation of the Methods adapted to the different kinds of school work.

Prof. Carhart will begin in the next number a series of practical papers on Oral Reading. Other members of the Normal School Faculty will write upon their special subjects from time to time. The great press of duties attendant upon the close of the year has made it difficult to give as much time to the preparation of matter for this number as will be given in the future. It is hoped, however, that the careful reader will find as much food for thought in this number as he will care to attempt to digest during July weather.

LEARNING AND REMEMBERING.

LEARNING and REMEMBERING have some things in common. The study of these processes must precede any intelligent direction of the child's education. A thing is learned when the mind has possession of it to that degree that it can be recalled. There is a wonderful and mysterious connection between the different things which the mind has learned, by which what is in the mind at any moment will cause that which has been associated with it to appear.

To illustrate: While writing the last sentence the words "mysterious and wonderful" brought to my mind the statement I had once read that a certain philosopher of two or three cen-

tures ago said that there were three things wholly inexplicable to him: One was the cause of memory; another, the cause of the tides in the ocean; but the third refuses to appear at this instant. At some future time an idea may be in my mind which will draw this third and now unremembered thing before consciousness without bringing in the other two. Though it is probable that these two are so fixed in the memory by the energy with which my mind has now contemplated them that the recall of the third, if it shall occur, will cause the other two to appear.

The *partial* remembrance of this statement was not accidental. It came in obedience to a law of association. At a former time my own thought of the mystery of this power had been associated with this statement. Now when that thought is again present to consciousness the statement comes with it. I can also see a reason for remembering the statement about the tides, but can, of course, see no reason why I should not remember the third thing in the statement. If I ever shall remember it I may then be able to see why I do not remember it in this connection. But it is evident that I was at the time much more interested in the two things I do remember than in the one I have forgotten.

This suggests that *interest* is one of the conditions of learning and of memory. If anything shall be learned easily and quickly there must be a present and absorbing interest in it. This so focuses the energies of the mind upon it that it is, as it were, burnt into the mind.

But things can be learned without an attendant interest. Repetition will serve to fix them firmly in the memory. This is a tedious process, but it is sure. It is a law of mind that as it has once acted it tends to act again. By frequent repetition, therefore, this tendency becomes so strong in any given instance as to be irresistible.

THERE are many different associations by which ideas may be connected with each other. There is no such thing as the existence of an idea in the mind that has no association with others. Each idea is connected with every other, either immediately or remotely. Somewhat similar is the connection between the dif-

ferent cells in the brain. Each brain-cell has from one to six small threads or nerve-fibers by which it is joined to other cells. It would be possible, therefore, to trace a connection between any two cells in the brain, however distant, through the intervening fibers and cells. So there is an association of each idea in the mind with every other idea, either immediate or remote.

Some of the more frequent associations have been grouped together and called laws of memory. It is not our purpose to enter upon a discussion of these laws, so-called. For our present purpose they can be grouped under two:

(1) One idea may be associated with another as its reason, or its consequence. This we call the logical connection. All processes of reasoning are the selection and grouping of ideas under this relation.

(2) There is another group of associations that are, in a sense, arbitrary or accidental. As when two events follow in succession, or two things are thought as co-existent in space, or as like or unlike each other, etc. Prominence of one or another of these associations gives rise to varieties of memory. One mind remembers dates, another places, another names, another resemblances or differences, another contemporaneous events, and the like.

These two kinds of groupings belong to two distinct types of mind. The one is strong in tracing effects to causes, or in making inferences from data. They learn things in this way, and so remember them. In this case the mind is dealing with things.

The other type seizes upon the accidental and arbitrary relations between things and remembers those. They tend to deal less with things and more with the symbols of things. They will remember words without the things which the words symbolize. They have merely a mechanical memory. It is the former rather than the latter kind of mind that the teacher should seek to build.

[*To be continued.*]

DISCIPLINE OR TRAINING.

BEFORE proceeding to a fuller discussion of disciplinary studies we will consider briefly the two thought-processes which result in discipline. It is the relation of reason and consequence that is chiefly employed in these processes. We use the term reason to name both the cause and the effect. That is, the cause is viewed as the reason for the effect, or the effect may be considered as the reason for the cause, or rather for belief as to the cause. A spark drops into a barrel of gun-powder. This is a reason for believing that an explosion will follow. Or, an explosion of gun-powder occurs. This is a reason for believing that fire had been applied to it. But both of these are examples of deductive reasoning. The process is, "It is the nature of fire to explode gun-powder, therefore this particular fire will explode this particular gun-powder." Or, in the other case, the general proposition is, "Explosions of gun-powder are caused by fire; therefore this particular explosion was caused by fire." The movement of the mind in deductive reasoning is from the known general to the unknown particular under this general.

In inductive reasoning the mind starts with a fact of experience. This is compared with another experience, and another, and others in the same field. Some one or more things are found to be present when any particular experience is repeated. From these repeated experiences we generalize that whenever these things are present, this particular experience will result. Thus we arrive at the general notion that fire explodes gun-powder.

It thus appears that the product of my inductive process becomes the premise or starting point of my deductive process.

THE inductive process of reasoning is often named the Baconian method, not because Bacon was the first who employed it, but because he first demonstrated its value in the discovery of new truth. These two processes, the inductive and the deductive, are both involved in that activity of thought that results in the discovery of new truth. There is no such thing as an exclu-

sive use of either in thinking. In any given complex thought-process, if the inductive process is prominent and the deductive subordinate, the method is named *inductive*. If it is the deductive process that is prominent, the method is called *deductive*. The deductive process is found in its greatest purity in mathematical reasoning. The reason for this is apparent.

The natural sciences have great educational value as studies in the school because of the training which they give in the inductive processes. We have now reached the point at which we can enter upon an investigation of the value of each class of the natural sciences, and their relation to each other. But the prescribed limits of this discussion at this time require that it be continued in the next number.

THE STUDY OF WORDS.

THE power to use words with intelligent precision is no small indication of the value of the education one has received. Educators generally, hold that one great design of all instruction is to give power in the use of language. It is evident that good general lessons always tend to fix in the mind of the pupil the terms for the things and actions considered, and for the qualities of the things and actions: while all lessons on number and form are efficient means in increasing his vocabulary. Indeed, Mr. Grube sets forth as one of the principal aims of number work, its purpose to give skill in the use of language. It is certainly very clear that this is an important feature of such lessons as have been indicated, and that, should these lessons not make the pupil familiar at least with the principal terms used, there would be reason for considering them as having fallen short of the accomplishment of their full design, however successful in other respects.

In this early oral instruction the pupil will become familiar, in the main, with simple or primitive words, i. e., with those words from which, by change or addition, others are derived. It is a principle that in learning the words in this early work, the knowledge of the form must be based upon a knowledge of the significance. This implies that the process of explaining the

words should be one of illustration by example, in which the thing, action, or quality denoted by the word is submitted to the pupil's observation, or verified from his experience at the time the word is presented.

The reading work of the first three years presents the pupil with those words, mainly, with which he is already familiar orally ; but by the fourth year, or whenever the Third Reader is used, he has obtained such facility in reading that he may begin the study of derived words. There should be some regular provision for explaining these words in connection with the reading work.

It is to be noted :—

1. That the words gained in the first three years are for the most part primitive words.
2. That they are explained by example.
3. That the words to be mastered in the Third Reader grade consist mainly of secondary or derived words which have already been treated in their simple form by example, and may therefore be comprehended in the derived form without employing the method of illustration by example.

In considering the treatment of derived words two questions present themselves :—

1. Which shall be treated first, the prefixes or the affixes ?
2. Which shall be treated first, the Saxon prefixes or the Latin prefixes ?

As between the prefixes and the affixes a decision is reached by considering the fact that the words to which affixes are added are simple English words which the pupils already understand.

As between the Saxon and the Latin prefixes, the answer will be evident when it is remembered—

1. That the Saxon prefixes are added to simple English words that are already familiar.
2. That the syllables to which the Latin prefixes are added are not simple English words, and not even words at all in themselves.
3. That the Latin prefixes assume various forms.

The Latin prefixes have one important advantage, however, in their distinct and unvarying meanings.

The order of presentation is, then :—

1. Affixes.
2. Prefixes.
 - a. Saxon.
 - b. Latin.
 - (1) The original form.
 - (2) The assimilated form.

The general nature of the instruction in words may be shown as follows :—

If the class are studying the reading lesson on page 52 of McGuffey's Third Reader, they will, in their treatment of it, consider the word *banker*.

There are five steps that may be taken with this word :—

1. To obtain the meaning—one who banks, or one who carries on banking.
2. To have its difference from *bank* pointed out.
3. To obtain other words having the same ending; as, *writer*, *gardener*.
4. To obtain their meaning; as, *one who writes*; *one who gardens*.
5. To lead the class to infer that the affix *er* denotes *one who* does a thing.

It will be seen from the foregoing, that the work is to be oral, requiring no text-book other than the reader in use; that the results are obtained by analyzing words, with whose meanings the class is familiar, and by inference based upon observation of that which the analysis gives; that words are to be explained in groups, the derivative words being formed from their primitives on uniform principles, and that the work should not be begun until the pupil has sufficient knowledge of language to furnish the material for the exercises.

HOWARD SANDISON.

ENGLISH GRAMMAR.

It is desired to present in this first article some general views upon the subject to be considered, deferring the discussion of

the detailed matter of English Grammar to subsequent articles. A statement which shall make clear the *exact nature of the materials treated* by the subject, the *true objects* sought in teaching it, with the *means proper* to these ends, will be the first step towards placing the writer and his readers upon common ground.

English Grammar is a language subject, i. e., it has language for its subject-matter. This fact separates it from mathematics, natural sciences, history, etc., and places it in a class of studies of which orthoepy, spelling, composition, rhetoric and reading are members. We have thus not only taken a step in the definition of our subject, but are helped in seeing its relations to these kindred subjects. Grammar is distinguished from the other members of the class called Language studies, by the fact that it has to do with the language as sentences. It is important that this be remembered throughout. Spelling and orthoepy deal with language as *words*; composition, rhetoric and reading, as *discourse*; grammar, as *sentences*. For convenience these may be designated Word studies, the Sentence study, and Discourse studies. It is not meant that these are practically distinct; naturally their boundaries will not be sharply defined in the actual teaching of any one or more of them. What is said above is intended only to show the logical ground of separation. It is plain that a scheme of language study which leaves out of account any one or more of these three classes, will be deficient; and it is not less obvious that a definition of English Grammar that ignores this three-fold view of language, will be partial and misleading. There is no more fruitful source of confusion and error in the teaching of this branch than the failure to bound the subject, both as to its matter and the objects to be attained in teaching it.

There is manifest want of clearness in the ordinary statement and understanding of the objects to be sought in grammatical study. To say, "English Grammar is studied that we may learn to speak and write the English language correctly," is to propose an end that belongs to all the Language subjects in common. This does not distinguish the sentence study from the Word studies, nor from the Discourse studies.

What, then, are the distinct objects to be accomplished by the study of English Grammar?

1. It proposes to give a knowledge of the principles of correct sentence construction—in other words, to teach the pupil how to construct sentences correctly. In this view Grammar is a science; it has systematic, organized knowledge to give; it has a body of principles derived from and underlying the facts of the sentence.

2. This subject is studied that the pupil may acquire skill in constructing and in interpreting sentences—that he may get facility in applying these principles to the actual building of all the sentences that he speaks or writes, and in comprehending the sentence as the unit of discourse. As spelling and orthoepy begin with letters and elementary sounds and teach, through intelligent practice, the right forming of these into written and spoken words, so Grammar presupposes the words and seeks to make the pupil skillful in building these together, under certain regulative principles, into sentences. (In like manner composition, as the art of discourse, presupposes sentences, and organizes these into the whole, called discourse.) Thus Grammar is an art, as well as a science; and in common with art generally, it looks to the *doing* of something—in this case the building and interpreting of sentences.

It remains to point out in general terms the means to be made use of in securing this threefold end of Grammar. The principles of the sentence may be derived by the individual from an extensive study of the sentence itself as it stands in the literature of the language, or they may be learned directly from the textbooks upon the subject. If the former course be taken, the mind of the learner will go through all the processes of an original discoverer, varying the results of his own thinking by comparing them with those of others; if the latter method be chosen, he will accept the results of the thinking of others, relying upon future investigation and study to attest their truth. Perhaps the middle ground between these would be better, all things considered, than either pursued to the entire exclusion of the other. The ability to interpret readily must come from long-continued

practice in analysis to get the meaning of the classical English sentence ; while skill in building this form can be acquired only by faithful, persistent exercise in expressing our own thoughts in the best sentence form.

W. W. PARSONS.

PRIMARY DEPARTMENT.

[This Department is conducted by LEWIS H. JONES, Prin. Indianapolis Training School.]

PRIMARY NUMBER.

NOTATION.

WHEN pupils have decided that ninety-nine is the largest number that can be expressed by two figures, the teacher should prepare the way for them to see how to use three figures. The use of three figures in representing numbers in the Arabic system of notation, necessitates the use of the third, or hundreds' place. Before this necessity really exists for pupils, or before they can thoroughly understand the matter by explanation, each pupil needs to have distinctly brought into consciousness the idea of *third* or *hundreds' order*. This must be done objectively, as in the development of the idea of *tens' order* and *units' order* (as explained in a preceding paper). When this first (thought) period (composed of units' order, tens' order, and hundreds' order) has been developed objectively, the imagination of pupils may be made to create the higher orders and periods out of the materials thus obtained without further use of objects, except perhaps occasionally as a test for the correctness of the ideas of the pupils.

Take ten bundles of sticks (tooth-picks will do, though longer sticks are better when larger bundles are to be constructed) and count them in the presence of the pupils. Say, "When people have ten tens all together in this way" (placing a strong rubber band over the entire set, thus binding all firmly into one large bundle) they call all together *one hundred*." Have pupils repeat the name often, and select the *hundred* of sticks from a collection of *tens* of sticks. Have them count the number of *tens* in the

hundred, and recite "Ten *tens* are one *hundred*." Drill until the relations are clearly seen, and the result permanently fixed.

Take the sticks just used and lean them against the black-board, supporting them on the ledge. Place the bundles as far apart as you wish the figures to stand in representing numbers, the *one* stick being on the right, the *ten* of sticks next on the left of the *one*, and the *hundred* of sticks next on the left of the *ten*. Ask one pupil to write a figure 1 over the *one* stick so it will mean the one stick; and another to place a figure 1 where it will mean the one *ten* of sticks. Thus far the representation has been in review. Now comes the advance point. Ask a pupil to write a figure 1 directly over the one *hundred* of sticks.

Now give an exercise in pointing in response to directions as follows: "Touch the figure 1 which means the one *ten*," "Touch the figure 1 which means the one *one*;" "Touch the figure 1 which is over the one *hundred*;" and, after awhile, "Touch the figure 1 which *means* the one *hundred*."

Remove successively the sticks from each of the places and continue the pointing and reciting till pupils infer that the figures mean the same whether the objects are in sight or not.

Replace the sticks differently at different times, and have pupils place figures according to what they see, until some such arrangement of figures is obtained as is seen in the margin.

1	2	5	Examine the different columns of figures with the
2	4	3	objects in hand for illustration, and show that the
1	3	2	figures 1, 2, 3, and 5, of the first column mean re-
1	1	1	spectively one, two, three, and five, <i>ones</i> of sticks;

that the figures 1, 3, 4, and 2, of the second column, mean respectively one, three, four, and two *tens*, of sticks; and that the figure, 1, 1, 2, and 1, of the third column, mean respectively one, one, two, and one, *hundreds* of sticks.

Refer to the first column of figures again, and explain as follows: "Because this figure 1 means one *one*, it is said to be written in *ones' place*; because this figure 2 means two *ones*, it is said to be written in *ones' place*."

Same with figures 3 and 5. Then generalize. Because each of these figures means *ones*, it is said to be written in *ones' place*.

Similar explanations should be made of the terms *tens' place*, and *hundreds' place*.

Pupils should now have an exercise of finding a figure that is written in *ones' place*, or a figure that is written in *tens' place*, etc., etc.

hundreds' place.	tens' place.	ones' place.
1	2	5
2	4	8
1	3	2
1	1	1

Now place the terms *ones' place* over the figures which mean ones, writing in a vertical position; the same with *tens' place* and *hundreds' place*, until the work appears on the board as it is represented in the margin.

Repeat the exercise, with the work at the board in its present form, of pointing out the figures and telling what each means (expresses or represents). This time let pupils add the reason, as follows: "This figure 2 means two *tens* because it is written in *tens' place*." "This figure 2 means two hundreds because it is written in *hundreds' place*," etc., etc.

Ones' period.

hundreds' place.	tens' place.	ones' place.
1	2	5
2	4	3
1	3	2
1	1	1

Teach now that *ones' place*, *tens' place*, and *hundreds' place* make up *ones' period*, and place the work as finally shown in the margin.

Teach now that *ten hundreds* make one *thousand*, and show where the figure 1 ought to be written so that it will mean one thousand. So *thousands' place*, *ten thousands' place*, and *hundred-thousands' place* may each be demanded by the enlarging thought of the pupil. These three places make up *thousands' period*.

A STUDY INTO THE NATURE OF SCIENCE.

THE word "science" is derived from the Latin verb *scire*, to know. The term "science" was originally applied to any general collection of things known on all subjects.

Later, when the knowledge of particular subjects became more comprehensive, the term was applied to the collected facts on a special subject, under any relations. As the thought of the world progressed the term became still more limited in application.

The present received meaning is, that "Science is the classi-

fied knowledge of facts, events, or phenomena, as based upon or derived from certain fundamental powers, causes, and laws, for the purpose of the discovery of the essential nature, final cause or underlying thoughts of the subject treated."

In order to the formation of this classified arrangement, and the discovery of the underlying thoughts and final cause, we must consider the facts, events, or phenomena of our subject, in those great and essential relations under which objects are cognized.

Some of the more important of these relations are, those of likeness and difference, whole and part, cause and effect, number and magnitude, permanency of connection in time or space, and adaptation to produce a desired end.

Thus we perceive that in order to formulate a science of the universe, we must know all things under all these relations; i. e., we must know in regard to every fact, event, or phenomenon, all the points of likeness to, and all the points of difference from, all other things in the universe; we must know all the wholes of which it is a part, and all the parts which constitute it an existing whole; we must know all the causes which conspire to produce it an effect, and all the effects of which it is the cause; we must know every fact concerning it which can be expressed in arithmetical or geometrical language; we must know every other fact, event, or phenomenon, with which it is permanently connected in time or space; and finally, we must know all the inherent characteristics in it which adapts it to accomplish any desired end, and all the characteristics in other facts, events, or phenomena, which are fitted to produce it as a desired end.

When we know that these are only the more important relations, and that every object, fact, event, or phenomenon in the universe must be cognized in *all* its relations in order to make a complete science of the universe, it is plainly evident that such a science is impossible to a finite mind.

M. M. F.,

Pupil in Theory Department Indianapolis Normal School.

HOW TO GET, ARRANGE, AND USE PICTURES IN LANGUAGE WORK.

CUT the picture from the papers printed for children. Any simple picture will serve the purpose, but gather a quantity of them. Paste them on bright colored cardboard, cut large enough to leave a margin of color around the edge of the picture.

Number your pictures, so that you may not give the same one too often.

Children of six years, in the First grade, may have these pictures given to them. They may at first merely tell what they see. While leading the little ones to give these simple statements, the foundation must be laid for the results required in articulation, pronunciation, voice culture, etc.

After a little practice with these short sentences they may be directed to give short description of objects seen, using at first but one qualifying word. Then to give sentences describing action.

In doing this work, sufficient opportunity will be found for correction of the errors that creep into children's talk; and by leading them to talk freely, the corrections being made in such a way that children are not afraid to say what they see or think, many a rule for correct speech may be impressed.

If there be not time enough for this oral work, much good may be accomplished by the use of these pictures during the study-time.

Beginners, able to spell but few words, will work with great enthusiasm at their desks, making with the alphabet cards used in this grade, the names of the different objects recognized. True, the spelling is often ludicrous, but it becomes beautiful when behind it all is seen the child-mind actively engaged in the work of original creation.

While the teacher passes rapidly from one desk to another, praising this one and that for the number of words made, some corrections can also be made in the spelling, and these are strongly impressed in this way. The little ones are eager to know how

to spell the names of the objects correctly for the next time they may have the pictures, and exercise their ingenuity in many ways to find out and remember. Their eyes brighten when they see the pictures coming. It is no task to do this work.

When the word-making becomes an old story, they may be told to tell with their cards what is being done in the picture; and one will be surprised day after day with the large statements they try to make. If capital letters are introduced into their little boxes they may be taught to begin each new thing they wish to tell with a large letter, and they can easily be taught to use the period at the end of the statement.

For the Second grade the picture-work may be commenced as given above; but after the oral work is done it should be reproduced in writing and carefully inspected. Now is the time to impress capitalization, and the easiest form of punctuation.

It is often desirable in this grade that all the pupils should have the same subject for thought and conversation. To accomplish this, have several copies of the same small picture; pass them to one row of pupils; have them hold the pictures long enough to see what they would wish to talk about as being the most prominent object. Then pass them across the room in this way, the pupils having time by this means to prepare their statements in good form.

They may compare different statements and pass judgment; criticising favorably and unfavorably.

Around this description of the most prominent object may be grouped the statements that belong to the rest of the picture, which may be obtained the next time the pictures are passed.

After the description of the picture, the children are encouraged to use the imagination and construct a story for which the picture will serve as an illustration.

They may be told to do much of this for the entertainment of the other pupils, and criticisms are withheld as to results, except in actual errors of speech.

ISABEL KING,

Critic Teacher in Indianapolis Training School.

OFFICIAL DEPARTMENT.

[From the Letter-Book of the Superintendent of Public Instruction.]

DIVISION OF REVENUES WHEN A TOWN IS INCORPORATED.

[Letter-Book G. 229.] It is the duty of the town trustees as soon as possible after incorporation to appoint school trustees, who shall have the sole management of the schools of the town. From the time of their appointment, the township trustee's control of such schools ceases, and it is his duty to pay over to the town school trustees all moneys in his hands which would have been used by him, had the town not been incorporated, for the benefit of the children residing therein. He should arrange with the town school trustees a satisfactory way of determining the amount to which they are entitled. For this purpose, a special enumeration of the children may be necessary.

INCORPORATION OF A TOWN AFTER THE LEVY OF TAXES FOR SCHOOL PURPOSES.

[G. 317.] You say that the trustee of Smith township made certain levies for school purposes; that afterward, and before the taxes were paid, the town of Churubusco in said township became incorporated, and that the trustees of the town now demand a share of the local tuition and special school revenue, which you have paid into the hands of the township trustee. You do not state whether the people of Cherubusco paid the local tuition and special school taxes which, previous to the incorporation of the town, were levied upon them by the township trustee.

The Attorney-General can find no statute or decision on the legal effect of the incorporation of a town upon taxes already levied by the township—whether it suspends such levies or not. But if, as a matter of fact, the taxes levied by the township trustee previous to incorporation were paid by the people of the town after its incorporation, I think the town school trustees are equitably entitled to demand the amount of such taxes that was collected from the people of the town.

ADOPTION OF TEXT-BOOKS REQUIRES UNANIMOUS VOTE.

[G. 294.] The law on this subject is, "No text-book hereafter adopted by the county board shall be changed within six years from the date of such adoption, except by unanimous vote of all the members of such board."

Now, strictly, the change of text-books is not completed till a substitute is adopted for the one discarded.

I must, therefore, decide that the unanimity of the board must be secured throughout all the proceedings of the change. Properly, the question ought to be put in such a form that it can be decided by voting once; as, for example—

"*Resolved*, That ——'s Readers be substituted for ——'s."

But if the question should be divided, each part of it must be carried by a unanimous vote.

WITHHOLDING PART OF TEACHER'S WAGES.

[G. 311.] The language of the law seems to be imperative that the trustees shall retain 25 per cent. of a teacher's wages till the report, prescribed in section 4447 Revised Statutes, is made.

One of my predecessors was of opinion that to withhold 25 per cent. of the wages for the last month of the term would be a sufficient compliance with the law. I assent to that opinion.

JOHN W. HOLCOMBE,

Sup't Public Instruction.

June 15, 1883.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

DOES your subscription to the Journal expire with this issue? If so renew at once, that there may be no break in your file.

Teachers will be interested in reading the article by J. F. Richard, entitled "*Buckeye vs. Hoosier*." The same article appears in the *Ohio Monthly* this month. The comparison is certainly creditable to the Hoosier.

The friends of Asbury University are making a vigorous effort to raise the required amount in order to secure Mr. De Pauw's magnificent gift of \$300,000, which is simply a starter, to be followed by a large bequest. The time is up August 1st. It can't be true that the friends of the college will let this once-in-an-age opportunity slip through their fingers.

"MICHIGAN COMPULSORY TEMPERANCE EDUCATION LAW."—The Michigan Legislature, by an almost unanimous vote, has passed a law requiring teachers applying for license to be examined "in physiology and hygiene, with particular reference to the effects of alcoholic drinks, stimulants and narcotics upon the human system." There will be a keen pursuit of the study of temperance physiology and hygiene during the months to come, among the 14,000 public school teachers of the Wolverine State, and the more than 28,000 new applicants for their places, who will put in an appearance at the summer and fall examinations.

PRACTICAL EDUCATION.—Governor Butler, in his speech at the centennial celebration of Phillips Exeter Academy, recently held, took occasion to repeat what he has before said, viz: "That practical knowledge for, practical men of business was more essential than the classics, which are soon forgotten. The engineer and the mechanic are more essential to the world's progress than the scholar; for to-day the engineer has his hand upon the throttle of the universe." President Eliot, of Harvard, who followed Gov. Butler, indirectly answered him by saying: "The most to be learned here beyond all science is the eternal worth of character. You learn to cultivate the mind and the heart. Things that are learned here are far superior to things mechanical; they are hope and fear and reverence. These endowments are superior to anything mechanical in this world."

OLD SHOES.

How much a man is like old shoes!
 For instance: Both a soul may lose;
 Both have been tanned; both are made tight
 By cobblers; both get left and right;
 Both need a mate to be complete,
 And both are made to go on feet.
 They both need heeling, oft are soled,
 And both in time turn all to mould.
 With shoes the last is first; with men
 The first shall be the last; and when
 The shoes wear out they're mended new;
 When men wear out they're men-dead too.
 They both are trod upon, and both
 Will tread on others, nothing loath.
 Both have their ties and both incline
 When polished in the world to shine;
 And both peg out—and would you choose
 To be a man or be his shoes?

[Chicago Tribune.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR MAY.

READING.—1. Name three things essential to the correct reading of a sentence. 3 pts, 3½ each.

2. What exercises constitute a good drill in articulation? 10

3. What is meant by the natural key or pitch in reading? What is its importance in oral reading? 2 pts, 5 each.

4. What means would you use to break up a monotonous tone in reading? 10

5. Write five questions which you would ask to prepare a class to read the stanza :

"I wish I were a reindeer,
To gallop o'er the snow;
Over fleecy Lapland drear,
So merrily I'd go."

5 pts, 10 each.

ARITHMETIC.—1. Will multiplying quarts by 2 produce pints? Why? 5, 5.

2. Write the figures, three hundred seventy-five hundred-millionths; three hundred, and seventy-five hundred-millionths. 5, 5.

3. Find the value of $(25 - 16) \frac{1}{2} \times (12\frac{1}{2} - 8\frac{1}{2} \times 8)$. 5, 5.

4. Show that multiplying both terms of a fraction by the same number, and dividing both terms of the result by the same number (a different one from the multiplier) does not change the value of the original fraction. 5, 5.

5. Divide the product of $12 \times 25 \times 65$ by the product of $6 \times 5 \times 13 \times 2$, by cancellation, and explain the work. 5, 5.

6. Two vessels sailed *at noon* from different ports toward each other; when they met, the clocks, which had just been corrected, showed in one a gain of 20 minutes, and in the other a loss of 20 minutes; how many degrees of latitude apart were the ports? 5, 5.

7. At what % of par must I buy a 6 % stock, to realize a 9 % income? 5, 5.

8. Extract the square root of $3\frac{1}{3}\frac{1}{4}$. 5, 5.

9. If $\frac{1}{4}$ bushels of oats will keep 4 horses $\frac{1}{3}$ of a day, how many horses will 9 bushels keep $\frac{3}{4}$ days? 5, 5.

10. If a cube whose edge is 1 inch weighs 1 oz., what will a cube weigh whose edge is 2 inches? 5, 5.

ORTHOGRAPHY.—1. What is the distinction between a vocal and sub-vocal? Write 5 of each. 3 pts, 6, 2, 2.

2. What is the distinction between a diphthong and a digraph? Illustrate each by two words. 2 pts, 6, 4.

3. Define orthoepy and orthography. 2 pts, 5 each.
4. Syllabify and accent: *Opponent, evening, illustrate, dieresis, museum.*
5. Write phonetically, indicating the vowel sounds by a diacritical mark: *Eighteen, piecemeal, bicycle, strychnine, Wednesday.*
6. Spell ten words dictated by the superintendent. 10 pts, 5 ea.

THEORY OF TEACHING.—1. Why is all intellectual effort weak while experiencing intense feeling?

2. What are the physical conditions that are essential to energetic mental activity?

3. Why should not fear be employed as a motive to induce pupils to study?

4. In what does abstract knowledge differ from concrete?

5. What is tact?

NOTE.—The superintendent is advised to give credit to the applicant for the intelligence manifested by his answers rather than for their conformity with his own notions of their correctness.

GRAMMAR.—1. Define a noun. Name the different kinds of nouns. Define each. 3, 3, 4.

2. Write a sentence containing a common noun made proper by its use.

3. Write a sentence containing *that* used as a relative pronoun; a sentence containing *whom* used as a relative pronoun. 5, 5.

4. Write a declension of the noun *man*.

5. What is conjugation? Give a conjugation of the verb *write* in the subjunctive mode, passive voice. 5, 5.

6. Give the conjugation of the verb *teach* in the potential mode, present perfect tense, active voice.

7. Correct the following sentence and give reason for correction: This is one of the most memorable battles that ever have or will be fought.

8. Analyze the following sentence: That man *has been* from time *immemorial* a right-handed animal, *is* beyond dispute.

9. Parse the italicised words in the above sentence. 3, 3, 4.

10. Punctuate the following sentence: How should all the apparatus of heaven and earth from the farthest firmament to the tender bosom of the mother who nourished us make poetry for a mind that has no movements of awe and tenderness no sense of fellowship which thrills from the near to the distant and back again from the distant to the near.

GEOGRAPHY.—1. What are the two motions of the earth? What division of time is marked by each? 5 5.

2. Define a lake. Define climate. 5, 5.

3. Describe the soil and mineral wealth of the Middle Atlantic States. 5, 5.
4. Name and give the capital of each of the Pacific States. 5, 5.
5. Name the chief exports of the Guianas; of Venezuela. 5, 5.
6. Where do the principal rivers in High Europe rise? Name the main stream of each slope. 5, 5.
7. Locate Egypt and name two of its productions. 5, 5.
8. Describe the surface of Australia. Its climate. 5, 5.
9. Name four principal rivers of Indiana. What and where is the capital? 5, 5.
10. What river crosses the province of Quebec? Where is Toronto? 5, 5.

PENMANSHIP.—1. What is a principle? What is an element?

2. Name and describe the five elements.

3. Describe the three principles used in forming capital letters. In what letters does the seventh principle () occur?

4. Analyze *C, H, c, k, l*.

5. Name and describe the position, for writing, which you prefer.

6. " 'Twas in the prime of summer time,
An evening calm and cool,
When four and twenty boys
Came bounding out of school,
There were some that ran and some that leaped
Like troutlets in a pool."

NOTE.—Copy with ink. Mark from one to fifty, according to merit.

U. S. HISTORY.—1. What is the relation of the newspaper to history? 10

2. What was the Kansas-Nebraska Bill, 1852? 10

3. *a* What led to the settlement of California? *b* In what year? a, 7; b, 3.

4. *a* Who was the first Republican candidate for President? *b* In what year? a, 6; b, 4.

5. What immediately led to the secession of the Southern States? 10

6. Name five prominent American prose writers, now dead. 5 pts, 2 each.

7. Describe the battle of Gettysburg, July, 1863. 10

8. Of what political parties were Alexander Hamilton and Thos. Jefferson leaders? 2 pts, 5 each.

9. Which is the oldest college in the country? What is the origin of its name? 2 pts, 5 each.

10. What are the chief advantages of a good knowledge of American history? 10

NOTE.—No answer to exceed ten lines.

PHYSIOLOGY.—1. Name and locate the bones in the forearm.

2. How are the bones nourished?
3. What is nutrition?
4. What is assimilation?
5. Name the principal centers of nervous action.
6. What are the different nerve activities that cause the beating of the heart?
7. What are the voluntary muscles?
8. What is reflex action?
9. What is the function of the auricles of the heart?
10. Where is the gray matter situated in the brain and spinal cord?

ANSWERS TO STATE BOARD QUESTIONS FOR JUNE.

READING.—1. The actor or the elocutionist, by gestures and by change of position or of features, has specially in view the object of bringing out the sentiment or feeling in a selection. He aims largely to play upon the imagination or upon the emotional nature of his hearers, and more attention is given to the effect of the thought than to the expression or full conception of the thought. Reading accompanied by more or less of gesture, and which is specially designed to suggest pathos, is usually termed *emotional* reading. It is a sort of medium between simple elocution and *didactic* reading,—the object in the latter being to make clearly manifest and distinctly comprehended the thought contained in the language, irrespective of any effect the expression of that thought might produce. Didactic reading is cold and logical, emotional reading is warm and sympathetic.

2. "Emphasis is in speech what coloring is in painting. It admits of all possible degrees, and must, to indicate a particular degree of distinction, be more or less intense, according to the groundwork or current melody of the discourse." It may be indicated by an abrupt pause before or after a word, by lowering the voice in uttering the emphatic word or words, by a specially strong and vigorous utterance, by increasing the rapidity of one's speech, or by changing the quality of the voice from the pure or orotund to the aspirate or guttural, etc.

3. Pitch and force of the voice are entirely distinct, and it is important that they be not confounded. The former has reference to the elevation or depression of tones, the latter to their strength or power. *Pitch* is determined by the highness or lowness of the voice as compared with that which is natural; *force* is determined by the strength or gentleness of the voice as compared with that commonly used in reading or speaking.

Rate has reference to the rapidity or slowness with which words

are sounded, and is determined by the increase or decrease from the ordinary conversational tone.

5. "All worldly shapes shall melt in gloom,
The sun himself must die,
Before the mortal shall assume
Its immortality.
I saw a vision in my sleep,
That gave my spirit strength to sweep
Adown the gulf of time.
I saw the last of human mold,
That shall creation's death behold,
As Adam saw her prime."

From what poem is the stanza taken? What figurative or imaginative expressions in the first four lines? Explain the first. How can the sun "die"? Distinction between "mortality" and "immortality"? What, now, is the meaning of these four lines? Can any member of the class express the same thought in good prose and without figures? Why are figurative expressions generally used in writing upon these subjects?

How can a person "see in his sleep"? Give other figures corresponding to "gulf of time." Will the sun and creation "die" in the same way? Meaning of the last line? Etc., etc.

PHYSIOLOGY.—3. By continually doing a certain thing in the same way, one acquires a *habit* that is more easily yielded to than avoided, and a *feeling* that to perform the act in any other way is wrong. The thing that is habitual becomes more easily done, and from practice also more perfectly done. That which is done spasmodically is usually done awkwardly and imperfectly. Hence it is better, either in penmanship or in any other mechanical operation, to train the child properly from the first.

5. There are three pairs of large glands—the parotid, the sub-maxillary, and the sub-lingual—and numerous small ones that furnish saliva to the mouth. The parotid glands lie one in front of each ear, and are emptied of the saliva which they secrete by *Stenson's duct*, a small tube opening opposite the second upper molar tooth. Saliva moistens the food, assists in mastication and swallowing, brings out the savor, and its ingredient, known as *ptyalin*, changes two thousand times its own bulk of starch into grape sugar. Its action is stopped by the gastric juice of the stomach. It has about 995 parts water, out of 1000 parts.

6. Because the nervous energy is largely exhausted, and the system is not in a condition to accomplish a thorough digestion.

7. (See answer to question 9, June No.)

GEOGRAPHY.—1. Newfoundland, New Brunswick, and Quebec. Ottawa, on the St. Lawrence river, is the capital.

2. Central America lies between the Caribbean Sea and the Pacific Ocean. It is divided into five independent republics, namely: Guatemala, Honduras, San Salvador, Nicaragua, and Costa Rica.

3. The Bahama Islands, the Greater Antilles, and the Lesser Antilles. Sugar, coffee, tobacco, indigo, cotton, etc.

4. Atlanta is the capital of Georgia; Boston of Massachusetts; Concord of New Hampshire; Montgomery of Alabama; Augusta of Maine.

5. Ninety degrees. Sixty-six and one-half degrees.

6. Heat and moisture. On the nature of the soil and the climate.

7. As we leave the tropics going north the vegetation becomes less luxuriant.

8. The Scandinavian Peninsula, in north-eastern part of Europe; Spanish Peninsula, in the south-western part; the Italian Peninsula, in the south; Turkish Peninsula, in the south; Crimea, west of the Sea of Azof.

9. For most part it is very level. The only mountainous section is between the Azof and Caspian Seas.

10. The Malay race occupy the great archipelago between Asia and Australia.

PENMANSHIP.—1. The height of small *i* is commonly taken as the unit of measure for the *height* of letters. The horizon distance between the two straight lines in the letter *u* is the measure of *width*.

2. A slant of 52° is called the main slant. It is the downward stroke in the written letters. The connecting slant is a slant of 30° , and is generally formed by the upward movement of the pen in connecting principles and letters.

3. The base line is the level line, real or imaginary, on which the letters are written. The head line is the horizontal line, real or imaginary, to which the shortest letters extend.

4. *b, f, h, k, l*. Finger movement; fore-arm movement; whole-arm movement; combined fore-arm and finger movement.

5. The pen should be held between the thumb and first and second fingers, so that the holder will rest against the second finger at the root of the nail, and cross the first finger just forward of the knuckle joint, the end of the finger dropping down on it.

Place the inner corner of the thumb against the left side of the pen-holder opposite the lower joint of the forefinger, the thumb and fingers bending outward from the holder. The third and fourth fingers should be brought under the hand, forming the hand-rest, and should rest on the corners of the nails, so as to slide easily on the paper. While writing, the back of the hand should be up; the pen-

holder should point over the right shoulder; the face of the pen should be turned toward the paper.

ARITHMETIC.—1. The denominator of a fraction shows the number of parts into which the unit is divided; dividing the denominator enlarges the size of each of these parts, and therefore the part of the unit taken is of greater value.

2. $\frac{22}{77} = \frac{2}{7}$. Dividing both terms of the fraction by 11 does not change their relation, and therefore does not change the value of the fraction.

3. a. $\frac{2}{3}$ of $\frac{1}{2}$ of $\frac{3}{4} = \frac{1}{4}$.

b. If $8 = \frac{2}{3}$ of a number, $4 = \frac{1}{3}$ of it, and $\frac{2}{3} = 4 \times 3 = 12$.

4. a. 5 lbs. avoird. = 7,000 grs. $\times 5 = 35,000$ grs.

b. As 5760 grs = 1 lb. apoth., 35,000 grs will = $6\frac{11}{14}$ lbs. apoth.

c. He therefore gains $1\frac{11}{14}$ lbs. at \$1 per lb., or $\$1.07\frac{1}{2}$.

5. $300.33 \times 3.33 = 1000.0989$.

6. a. $40 \times 300 \times 10 = 120000$.

b. $120000 \times \frac{11}{100} = 132000$.

c. $36 \times 300 = 10800$.

d. $132000 \div 10800 = 12\frac{2}{3}$. Ans. $12\frac{2}{3}$ cents.

7. As the edges of cubes are to each other as the cube roots of their solid contents, the edge of the smaller cube will be one-fourth that of the larger, or 6 inches.

8. a. In the original distribution, A, B, C receive in the proportion of $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{6}$, or $\frac{2}{6}$, $\frac{4}{6}$, $\frac{1}{6}$.

b. C's share must be divided in the same relative proportion as the original shares; therefore,

c. A receives $\frac{2}{6}$ of \$10,000, or \$5714 $\frac{2}{3}$, and B $\frac{4}{6}$, or \$4285 $\frac{1}{3}$.

9. 7 gals. at 67 cents = 469

5 " 48 " = 240

12 " cost 709

709 + 291, (profit) = 1000

1000 \div 50 = 20, the number of gals. the mixture must measure.
20 gals. — 12 gals. = 8 gals., the water added.

10. $\frac{60}{8} : \frac{24}{10} \} :: 15 : 7\frac{1}{2}$. Ans.

GRAMMAR.—1. *We* is a pronoun; + is the sign of addition.

6. An adjective expresses an attribute of a subject; an adverb expresses a modification of an attribute.

7. The noun represents the agent, and the verb expresses the action.

What part of speech is the name of each boy in this room?

MISCELLANY.

NAMES AND ADDRESSES OF THE COUNTY SUPERINTENDENTS OF THE SEVERAL COUNTIES,

Elected June 4th, 1883, for the Term of Two Years.

COUNTIES.	NAMES.	ADDRESSES.
Adams	*J F. Snow	Decatur.
Allen	Jeremiah Hillegass	Fort Wayne.
Bartholomew	*W. T. Hacker	Columbus.
Benton	B. F. Johnson	Fowler.
Blackford	Lewis Willmar	Hartford City.
Boone	*M. La Follette	Lebanon.
Brown	Simon P. Neidigh	Nashville.
Carroll	*B. W. Everman	Delphi.
Cass	*D. D. Fickle	Logansport.
Clark	*John P. Carr	Charlestown.
Clay	John W. Stewart	Brazil.
Clinton	Wm. H. Mushlitz	Frankfort.
Crawford	*Edwin J. Bye	Milltown.
Daviess	*Samuel B. Boyd	Washington.
Dearborn	Harvey B. Hall	Aurora.
Decatur	John H. Bobbit	Greensburg.
DeKalb	*C. M. Merica	Garrett.
Delaware	*John O. Lewellen	Muncie.
Dubois	Andrew M. Sweeney	Jasper.
Elkhart	Piebe Swart	Goshen.
Fayette	Josiah S. Gamble	Connersville.
Floyd	*C. R. McBride	New Albany.
Fountain	*Jas. Bingham	Veedersburg.
Franklin	Michael A. Mesa	Brookville.
Fulton	Wm. J. Williams	Rochester.
Gibson	Henry A. Yeager	Princeton.
Grant	George A. Osborn	Marion.
Greene	Samuel W. Axtell	Bloomfield.
Hamilton	A. H. Morris	Noblesville.
Hancock	R. A. Smith	Greenfield.
Harrison	Daniel F. Lemmon	Corydon.
Hendricks	*A. E. Rogers	Clayton.
Henry	*W. R. Wilson	New Castle.
Howard	John W. Barnes	Kokomo.
Huntington	Edwd. A. McNally	Huntington.
Jackson	James B. Hamilton	Brownstown.

Jasper.....	*D. M. Nelson.....	Rensselaer.
Jay.....	Wm. J. Houck.....	Portland.
Jefferson.....	O. E. Arbuckle.....	Madison.
Jennings.....	*Samuel Conboy.....	Vernon.
Johnson.....	*M. F. Rickoff.....	Nineveh.
Knox.....	*W. H. Pemington.....	Vincennes.
Kosciusko.....	Samuel D. Anglin.....	Warsaw.
LaGrange.....	Enoch G. Machan.....	LaGrange.
Lake.....	Frank E. Cooper.....	Crown Point
LaPorte.....	Warren A. Hosmer.....	LaPorte.
Lawrence.....	*D. N. Ellison.....	Leesville.
Madison.....	Wm. M. Croan.....	Anderson.
Marion.....	Lea P. Harlan.....	Indianapolis.
Marshall.....	Thomas Shakes.....	Plymouth.
Martin.....	*Kinsey F. Cornwell.....	Shoals.
Miami.....	Walter C. Bailey.....	Peru.
Monroe.....	John M. McGee.....	Bloomington.
Montgomery.....	*J. M. Cantley.....	Crawfordsville.
Morgan.....	E. W. Paxson.....	Martinsville.
Newton.....	Wm. H. Hershman.....	Kentland.
Noble.....	*W. P. Denney.....	Albion.
Ohio.....	*R. E. Woods.....	Hartford.
Orange.....	Geo. W. Faucett.....	Orangeville.
Owen.....	Oliver P. McAuley.....	Spencer.
Parke.....	Wm. H. Elson.....	Rockville.
Perry.....	Israel L. Whitehead.....	Rome.
Pike.....	*John Whitman.....	Winslow.
Porter.....	*Homer Porter.....	Valparaiso.
Posey.....	James Kilroy.....	Mount Vernon.
Pulaski.....	W. E. Netherton.....	Winamac.
Putnam.....	Leonidas E. Smedley.....	Greencastle.
Randolph.....	*H. W. Bowers.....	Winchester.
Ripley.....	*Geo. W. Young.....	Napoleon.
Rush.....	J. L. Shauck.....	Rushville.
Scott.....	Jas. H. McCullough.....	Scottsburg.
Shelby.....	*Douglass Dobbins.....	Shelbyville.
Spencer.....	*J. W. Nourse.....	Rockport.
Starke.....	*Henry C. Rogers.....	Knox.
Steuben.....	*R. V. Carlin.....	Angola.
St. Joseph.....	Calvin Moon.....	South Bend.
Sullivan.....	Jas. A. Marlow.....	Sullivan.
Switzerland.....	Jas. R. Hart.....	Vevay.
Tippecanoe.....	Wm. H. Caulkins.....	La Fayette.
Tipton.....	*Frank B. Crockett.....	Sharpsville.

Union.....	C. W. Osborn.....	College Corner.
Vanderburgh....	*E. D. McAvoy.....	Evansville.
Vermillion.....	*A. J. Johnson.....	Newport.
Vigo.....	*John S. Vancleave.....	Terre Haute.
Wabash.....	Harvey A. Hutchins.....	Wabash.
Warren.....	A. Nebeker, } *F. M. Sutton }	Contested..... Williamsport.
Warrick.....	Wm. W. Fuller.....	Boonville.
Washington.....	*W. C. Snyder.....	Salem.
Wayne.....	John C. Macpherson.....	Richmond.
Wells.....	Wm. H. Ernst..	Bluffton.
White.....	Wm. Guthrie.....	Monticello.
Whitley.....	Jos. W. Adair.....	Columbia City.

* New Supts.

A TRIP TO KANSAS.

As many of the readers of the Journal own land in Kansas, and a great many more ought to, the writer will give a brief account of a recent visit he made to that sunny land.

Through the courtesy of the Neosho Valley Press Association an invitation was extended to several of the editors of Indiana to attend their annual meeting at Chanute, Kan.

Wishing to travel by the best and most reliable roads, tickets were secured to Kansas City *via* The Indiana, Bloomington & Western, and the Chicago & Alton. From this point the Kansas City, Lawrence & Southern Kansas was taken. The road passes through the most beautiful and most fertile part of Kansas, terminating at Harper, 303 miles from Kansas City.

During the meeting, the Press Association and all invited visitors were the guests of Chanute and its hospitable citizens. The convention closed with an amateur play, a banquet, and a ball, tendered by the citizens. At the close of the meeting the K. C., L. & S. K. R'y, through S. B. Hymes, the Gen. Pass. Agent, tendered the association and invited guests a free excursion to the end of the road. The entire trip was a kind of ovation. At Harper, the citizens met the company with a band of music and spread a bountiful dinner in a public hall. The Mayor made a welcoming address, etc. Free carriages were provided to enable the "foreigners" to see the country round about. At Wellington, where the night was spent, the people gave free entertainment, a grand reception in a very beautiful and commodious opera house, a banquet, a ball, and free carriages. At Independence the party enjoyed a free dinner and free carriages. At Humbolt free carriages again, to see the country, and a free supper set in the public park. Considering the fact that the

company numbered about 125, this hospitality is seldom if ever equalled.

The limited space in this number of the Journal forbids the naming of all the persons and places that deserve special mention. Gen. Pass. Agent Hymes, of Kansas City, accompanied the excursion in person, and did all he could to make it enjoyable. He received the warmest thanks of the entire party. The President of the Association, Gen. J. H. Rice, was also indefatigable, and will not be forgotten.

The writer had read glowing accounts of the beauty and fertility of Kansas, but had uniformly deducted about one-half for — well, aberration of judgment. He now finds himself in the condition attributed to the Queen of Sheba. Kansas is about 400 miles from east to west, and 200 from north to south. The eastern half is perhaps unsurpassed by any other 200-mile-square tract in the United States, for beauty and fertility. Much of this rich land, within easy reach of railroads, can yet be bought at from \$5 to \$10 per acre. *More anon.*

PHILLIPS EXETER ACADEMY.

This academy, located at Exeter, N. H., on June 21st celebrated its first centennial. This is the celebrated preparatory school in this country. Founded in the same year in which Cornwallis surrendered it is co-extant with the republic, and is properly denominated the Rugby of New England. Its chief work has been to fit students for Harvard and Yale. It has laid the foundation for the education of many of the brightest minds of this country. The following are a few of them: George Bancroft, Daniel Webster, Edward Everett, Lewis Cass, John P. Hale, John A. Dix, Jared Sparks, Richard Hildreth, Edward Everett Hale, C. W. Eliott, Benjamin F. Butler, etc.

Nearly a thousand old students attended the centennial. George Bancroft, the noted historian, made the principal address. His attendance at the school was over seventy years ago. E. E. Hale read a poem; President Eliot, of Harvard, Gov. Butler, and others made speeches.

SPICELAND ACADEMY.—This school has no superior in the state for the grade of work it proposes to do—and it does in reality a great deal more than many other schools of larger pretensions. The late Clarkson Davis made the school known throughout the state for thorough, honest work; and since his connection with the school ceased, his standard has been fully sustained. Timothy Wilson, late Supt. of Henry county, is to have charge of the school hereafter, and its good name will not suffer in his hands.

COUNTY SUPERINTENDENTS' STATE CONVENTION. ✓

The county superintendents met in Indianapolis June 26th, and continued in session two days. There were about seventy superintendents present—the largest meeting of the kind ever held in the state. The uniform expression was to the effect that the convention was the most profitable ever held.

There was a disposition to work, and to devote the time to matters of general interest rather than to questions of only local bearing.

It was conceded that the general appearance and general intelligence was an improvement upon any former convention.

B. F. Johnson, of Benton county, was president, and filled the duties of the position with credit to himself and with satisfaction to the meeting. M. A. Mess, of Franklin county, filled the laborious office of secretary, and gave universal satisfaction. Papers were read as follows:

Our Progress, W. H. Ernst, Wells county; The Duties and Difficulties of a New Superintendent, L. P. Harlan, Marion county; The Graduation of Licenses under the new Law, H. S. Tarbell, Supt. of Indianapolis schools; What the Legislature should do for County Superintendents, W. J. Houck, Jay county; Our School System, by State Supt. J. W. Holcombe; The Superintendent's Duties to his Teachers, Geo. P. Brown, Pres. of the State Normal School; Drawing in the Common Schools, by L. S. Thompson, of Purdue University. Other subjects were discussed.

As much that was said and done was of special interest only to superintendents, and as the papers and proceedings are to be printed in full in pamphlet form, the Journal will not attempt to make a detailed report. The subject that received most attention, and the one that teachers generally are most interested in, was,

THE GRADUATION OF LICENSES UNDER THE NEW LAW.

The following was adopted relative to the gradation of teachers' licenses under the law as amended in 1883:

A license for six months shall be granted on a general average of 70 per cent., not falling below 60 per cent. in any of the 8 statutory branches, or in theory of teaching. (This is the same standard as heretofore fixed by the association.)

A license for 12 months on a general average of 80 per cent., not falling below 55 per cent. in any of the branches, or in theory of teaching, or in success.

A license for twenty-four months on a general average of 90 per cent., not falling below 75 per cent. in any of the 8 branches, or in theory of teaching, or in success.

A license for thirty-six months on a general average of 95 per cent.,

not falling below 80 per cent. in any of the eight branches, nor below 90 per cent. in theory of teaching, or in success.

Special scale for teachers in graded schools of cities and towns:

No person shall be admitted to the benefits of the provision in behalf of teachers in graded schools except on presentation of a written request from a town or city school board, with a statement that said board desires to employ said applicant for a certain grade or work named or described, and that the expediency of complying with such requests shall be left to the discretion of the county superintendent. Upon the license issued to such applicant, the county superintendent shall state the grade or kind of work for which such applicant is licensed.

H. S. Tarbell, in his paper on the above subject, stated what the State Board recommended, which was in substance what is given above, and was agreed to by the convention, and added:

The changes in the problem of issuance and grading of certificates in the new law are important ones, and may result in great harm to the school interests, or be made the means of securing important benefits, as they may be judiciously or otherwise applied. * * * The evident purpose of the framers of the law was to allow special fitness for teaching to weigh largely in determining the issuance of certificates; to make a broader distinction than hitherto between the several grades of teaching; to cut off from the foot of the lists many of the poorest teachers; to relieve progressive, capable teachers from the drudgery of frequent examinations; to make for the more competent teachers a standard uniform throughout the state, thereby securing at length a greater uniformity in all the work of examinations, and finally to emphasize the value of professional attainments in our teachers.

The recommendations of the State Board of Education, Mr. Tarbell said, were "that licenses for six and twelve months be issued upon the same conditions as heretofore; that licenses for twenty-four months be issued to those gaining an average of 90 per cent. in the ten items consisting of the eight legal branches, theory and success, and not falling below 75 per cent. in any one of them; that licenses for thirty-six months be issued for a general average of 95 per cent., with a minimum of 80 per cent. in the eight branches, and of 90 per cent. in theory and success.

We ought, at least, to hold before the teachers their obligations to make themselves familiar with the best thoughts upon their profession. Some knowledge of the human mind; some idea of its development through the successive stages of school life; some idea how the several school studies affect the mind, and what process are suitable at one stage of development and unsuitable at other; some study of motives and the means of affecting them favorably.

some idea of the teacher's relation to his profession, to his pupils, his patrons, his superiors, his rights and obligations, should by all means be insisted upon.

Prior to adjournment the following officers were chosen by acclamation :

State Supt. John W. Holcombe, President, *ex-officio*.

L. P. Harlan, of Marion, and Charles R. McBride, of Floyd, Vice Presidents.

Michael A. Mess, of Franklin, Secretary.

Wm. R. Wilson, of Henry, Treasurer.

STATE NORMAL SCHOOL COMMENCEMENT.

The State Normal School, this year, graduated thirty-five. A peculiarity of this school is that after a thorough course in the mastery of subjects and the theory and art of teaching, a regular diploma is not granted—only "a certificate of graduation." After the graduate has gone out and *successfully* managed and taught school for two years, he returns and receives his regular "diploma." Hence the value of a diploma from this school. Out of the thirty-five only eight made addresses on commencement day. These addresses were of a high order. Governor Porter, who was present and delivered the diplomas and certificates, pronounced these equal to the best he had ever heard.

The attendance of the alumni was unusually large. Pres. E. E. White's address before them was highly appreciated. The alumni banquet, with the many happy speeches that followed, was a fitting close to the commencement week.

THE RICHMOND NORMAL SCHOOL. ✓

The Richmond Normal School is the name of a new school that is to open in Richmond next September. The location is certainly favorable; the buildings and grounds (formerly occupied by the Hicksite Quakers) are commodious and ample, and the faculty an excellent one.

At the head is Cyrus W. Hodgin. He is a graduate of the Illinois Normal University, was for many years one of the most popular as well as one of the most efficient teachers in the State Normal, at Terre Haute. His knowledge of the underlying principles of education, his familiarity with the most approved methods, and his high ideals of thorough work, are well known and undisputed. His associates are Jas. B. Reagan and Chas. E. Hodgin, both graduates of the State Normal, and Erastus Test, late principal of the Plainfield Academy, a teacher of large experience and ripe scholarship. This corps of instructors insures a first-class school.

NORTHERN INDIANA TEACHERS' ASSOCIATION.

An organization bearing the above name will be effected at Island Park (Rome City, Ind.) July 9th. The association will be in session during July 10th and 11th. The programme which has been prepared by J. K. Walts, Logansport, and D. W. Thomas, Wabash, contains the following subjects with others: 1. The Evolution of the Public Schools, by Jas. Baldwin; 2. English Instruction in the Public Schools, by E. E. Smith; 3. Getting a License, by Wm. Irelan. The management of the Assembly has offered the free use of good rooms for the meetings and the freedom of the grounds to all the members of the Association. A good time is expected.

PORTLAND.—The Eastern Indiana Normal, at Portland, has opened with 140 students. This is certainly a good beginning. The editor of the *Portland Sun* thinks that a superintendent of the Portland schools should be employed for \$60 a month. If such a sentiment is common, it is a disgrace to this growing little city. The public schools, under the superintendence of Morgan Caraway, never did a better year's work than the last.

NASHVILLE.—The Nashville Normal of six weeks, conducted by Prof. J. Fraise Richard and the county superintendent, was a fine success. The number of teachers required in the county is 72, and the number enrolled in the normal was 71. That "comes within one of it." The enrollment of the institute that followed the normal was 105. S. P. Neidigh is the superintendent.

The writer attended the one-hundred-thirty-sixth annual commencement of Princeton, N. J., College, held June 20th. This college was older than many of our western colleges at the time of the revolutionary war.

NATIONAL EDUCATIONAL ASSOCIATION.—The twenty-second annual meeting of this body will be held at Saratoga, N. Y., beginning July 9th, and ending July 11th. Teachers will bear this in mind.

The sixth commencement of the Edinburg high school took place May 24th, when ten graduates were sent out into the world. J. C. Eagle, the superintendent, is giving eminent satisfaction.

The catalogue of Raisin Valley Seminary, Mich., of which W. W. White, formerly of Indiana, is president, shows the institution in a thriving condition.

The *thirty-second* meeting of the American Association for the Advancement of Science will be held this year at Minneapolis, Aug. 15th to 21st.

The *Friends* held a national conference on educational matters at Earlham College, June 27, 28, 29, some particulars of which we hope to give our readers in the future.

Commencement exercises at Union Christian College were held June 6th, in the college chapel at Merom. There were three graduates.

Goshen high school graduated five boys and one girl this year. In most classes the two sexes bear an opposite ratio to this.

Muncie high school held its sixteenth annual commencement June 15th, 1883. There were 27 graduates.

The commencement exercises of the Southern Indiana Normal, at Mitchell, will take place July 26th.

Charles Scribner's Sons have sold out all their School Books to Iverson, Blakeman, Taylor & Co.

Concord Summer School of Philosophy will open its fifth term July 18th, at Hillside Chapel, Concord.

Logansport graduated the pupils from the high school this year without any formal commencement.

Rushville graduated three boys and two girls in the class of '83.

Hartford City high school sent out three graduates this year.

Answers to queries have been crowded out until next month.

PERSONAL.

Amos Sanders has been elected principal of the North Vernon schools for the coming year.

B. J. Bogue has been re-elected superintendent of the La Grange schools at an increased salary.

L. B. Griffin, a graduate of the State Normal, is the new superintendent of the Brookville schools.

C. W. McClure was re-elected principal of Crawfordsville high school, with an increase in salary.

E. E. Smith, of Purdue University, will do institute work this summer. Address at La Fayette, Ind.

Edwin F. Horn, principal of school No. 23, Indianapolis, is also managing editor of *The Colored World*.

A. D. Rogers was elected superintendent of Hendricks county by the vote of the auditor on the 25th ballot.

S. A. Chambers, formerly of Indiana, has been re-elected superintendent of the schools of Henderson, Ky.

James H. Smart was "doctored" recently. The State University conferred upon him the honorary title LL. D.

David M. Geeting, late superintendent of Daviess county, has been elected principal of one of the New Albany schools.

H. B. Jacobs, for many years Supt. of the New Albany schools, has been elected Superintendent of the Blind Asylum.

J. V. Coombs, formerly of Ladoga Normal, Ind., has been elected to the chair of English Literature at Eureka College, Ill.

A. H. Ellwood, formerly of Silver Lake, has been elected superintendent of the schools at Andrews, Huntington county.

J. M. Strasburg, teacher of science in the Richmond high school, has been elected superintendent of the Greenfield schools.

C. W. Harvey, for the past 14 years superintendent of the Greensburg schools, has accepted the superintendency of the New Castle schools.

John Howard Payne, author of *Home, Sweet Home*, was buried in Washington City, June 9th, after a thirty years' burial in the land of his exile—Tunis.

Kate M. Graydon, a graduate of Butler University, a successful teacher in the Indianapolis schools, has been elected instructor in Greek in the State University.

W. N. Hailman, of Detroit, Mich., formerly editor of "The New Education," a paper devoted to Kindergartening, will superintend the schools of La Porte next year.

Jas. G. May, the veteran teacher of Indiana, has passed his 80th birth-day, but is still in vigorous health, and this summer is cultivating with the hoe over an acre of ground.

J. C. Gregg has been restored to his old place, as superintendent of the Brazil schools, after an interregnum of one year. Communities like individuals, often have to correct errors.

Frank P. Conn, of Evansville, who has been acting as head clerk for State Supt. Holcomb, retires, and Hubert M. Skinner, formerly of Valparaiso, but for the past three years superintendent of the Brookville schools, takes his place.

John M. Bloss, ex-State Supt., has been elected superintendent of the Muncie schools, and has accepted. It is to be hoped that Muncie will stop its wrangling over school matters and give Mr. Bloss a chance to do them efficient service.

J. F. Richard, of Mansfield, Ohio, who has done acceptable institute work in several counties of this state, was vigorously "caned" at the close of a six-weeks' normal which he had been conducting at Nashville. Served him right. The cane had a yellow head.

James Baldwin, for many years superintendent of the Huntington schools, was elected superintendent at Muncie and at Rushville on the same evening. He accepted the Rushville call. Most superintendents are well satisfied if they can be elected to one place at a time.

Lemuel Moss, President of the State University, has for a number of years worthily borne the title D. D.—he is generally known as Dr. Moss. The Rochester University at its last commencement conferred upon the Doctor the additional title of LL. D.; so hereafter in addressing the President we shall have to say "doctor" twice.

President McCosh, of Princeton College, tendered his resignation at a late meeting of the trustees, that he might take charge of a Department of Philosophy, just organized. The trustees refused to accept his resignation, but appointed a *Dean* of the Faculty, who will relieve the President of all his duties except those that are purely literary. No man in this country stands ahead of Dr. McCosh as a philosopher and a profound thinker.

Geo. F. Bass, one of the supervising principals of the Indianapolis schools, and a practical school man, has associated himself with Henry D. Stevens in editing and publishing *The School News*. This little paper, intended to give both teachers and pupils valuable information in regard to the current events and important happenings of the world in a concise and intelligible form, will doubtless be much improved by Mr. Bass's experience and knowledge of what schools need. Such a paper should find its way into every school, and Mr. Bass with his common sense knowledge as to the kind of matter that will be useful and attractive, will certainly improve what is already a good paper.

J. B. Roberts, of the Hadley-Roberts Academy, Indianapolis, and Eli F. Brown, of the State Normal School, have bought out Prof. Kappes, principal of the Indianapolis Female Seminary, and will conduct that institution in the future, under the title Indianapolis Seminary, admitting boys in the lower grades only. These men are both well known, not only in Indianapolis but throughout the state, as excellent teachers and high minded gentlemen. They will doubtless make a school worthy the liberal patronage of parents both in and out of the city.

The boarding department, intended to accommodate non-residents, will be under the care of Mrs. Roberts, a lady eminently qualified for such a position. The Journal wishes the new enterprise eminent success.

Hon. E. E. White, ex-President of Purdue University, expects to remain for a time at La Fayette, and then may move to Columbus, Ohio, where he owns property. Dr. White feels that he did right in resigning the presidency of Purdue to prevent what he believed to be a calamity to the institution, and he knows that he was right in refusing to withdraw the resignation at the earnest solicitation of friends, after the "rider" had failed with the general appropriation bill. Let it be said to Dr. White's praise that he goes out with kind feelings and good wishes for Purdue, and will do all he can to give his successor a good start.

He expects to spend the next two years in literary work, in an educational line; and he does not expect in the meantime to accept any position that will distract him from his present purpose.

In the removal of Dr. White from the state Indiana loses one of its ablest educators and most honored citizens. He is in the prime of his life, and will in the future as in the past, be felt in the educational councils of the nation. The Journal regrets very much his loss.

James H. Smart, ex-State Supt., has been elected president of Purdue University, to take the place of Dr. White, resigned. The trustees took ample time to make a careful canvass of the subject

before deciding, and the general verdict is that in selecting Mr. Smart they made no mistake. No educational man is more extensively known or more favorably known throughout the state. The trustees could have selected no other man concerning whom so many people would have said, "that is a good choice." Mr. Smart's six years' service as State Supt. gave him a wide range of experience with men and affairs, and this experience will now be of value to him in his new position. His good common sense, his experience in educational matters generally, his ability to manage and direct the work of others, his ability to influence and control other people without offending them, his untiring energy and his ambition to do a little better than any body else has done, whatever he undertakes, are his strong points. The Journal predicts for him unquestioned success.

CLARKSON DAVIS DECEASED.

Clarkson Davis, for many years the principal of Spiceland Academy, died May 26, 1883, of lung trouble. He was well known in Eastern Indiana, and throughout the Friends denomination, as a clear-headed, conscientious, christian educator. His standard was very high for both scholarship and character, and his school became noted for its thoroughness and its moral influence. Over-work in early life had undermined his health, and for several years past he has been gradually failing. His active connection with the Academy ceased two years ago, but he retained his interest in it to the last, and in his will he remembered it liberally. In his death, education has lost one of its best friends and ablest representatives, the church one of its most exemplary members, and the state one of its noblest citizens.

BOOK TABLE.

After Supper is the name of a valuable little paper for boys and girls and for supplementary reading in schools, edited by M. L. Rinehart, of Indianapolis.

Gems for the Fireside, by O. H. Tiffany, D. D. Tecumseh, Mich.: A. W. Mills.

This is a library in one volume. It contains about 600 literary gems selected from American and English authors. We have examined many volumes of selections, but never before found one to equal this. Dr. Tiffany has been most happy in his selections, and has given us a great variety, both of prose and poetry, but all on a high plane. The selection possibly could be improved upon, but up to date it has never been equalled.

The *Wide-Awake* for July is on our table. It is an excellent number of this most excellent magazine. Among the other good things is a little sketch, prefaced by a picture of Kate Greenaway. In these days when Kate Greenaway has become almost a reality to children from the number of their possessions christened after her, a picture of the reality will be doubly interesting.

BUSINESS NOTICES.

Teachers and students of Geography should send twenty-five (25) cents to Ethell & Davis, publishers, Muncie, Indiana, for sample copy of "Book of Outline Maps." Something new. 7

Any one wishing to visit Kansas will do well to correspond with W. D. Hymes, 361 Ash street, Indianapolis.

A. H. Andrews & Co., of Chicago, the largest school supply dealers in the West, are still extending their business. Any reader of the Journal visiting Chicago will be well repaid by calling at 195 Wabash avenue, and looking through their vast establishment.

Teachers, for *Situations or Higher Salary*, address, with stamp for application blank and a copy of our "School Journal," NATIONAL SCHOOL SUPPLY BUREAU, 87 Fifth ave., Chicago, Ill. 7-21

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A second party of ladies and gentlemen will leave Indianapolis for Wyandotte Cave, July 17th, at 7:40 A. M. Fare for the round trip \$6., including railroad and steamboat fare, with meals and state room while on board.

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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

AUGUST, 1883.

No. 8.

*RECENT CRITICISMS ON THE PUBLIC SCHOOLS.

W. A. BELL.

PERHAPS the most frequent criticism made upon the public schools may be stated thus :

1. *They employ too much machinery. They are too Procrustean, trying to force all to the same standard, and thus destroying originality.*

Every careful observer of the schools of our cities must admit that there is truth in this charge.

In carrying on any business on a large scale, system and routine become necessary. Where many hands are employed, a foreman to plan and direct the work is needed. This economizes time. Regulations become needful, which in a smaller business would be irksome. As a rule, the larger the number of persons engaged the more "machinery" is there required. And only those who have made a careful study of the business can understand the necessity for the increased "*red tape*," so-called.

The public schools are not an exception to this general rule. In a system of graded schools an amount of routine becomes necessary that was unknown and unneeded in the old-time-single-room-independent school.

* Read before the State Teachers' Association.

In organizing these schools (15 or 20 years ago) the "machinery" was the first essential—it determined the plan of the work—it was necessary in bringing order out of chaos.

In some instances, perhaps in a majority, too much stress has been laid upon the *plan*. The Procrustean bedstead has been too rigidly applied. Under the "regulations" promotions must take place once a year, and no more. Pupils falling below the fixed standard, even one per cent., must be put back a whole year. A pupil must take *all* the studies of his grade without regard to mental or physical conditions. Teachers must all follow the same methods. If the superintendent decides in favor of the "phonic method" in teaching children to read, all primary teachers must work on that plan. If he champions the "word method," every primary teacher in the city must teach every child at its first lesson to recognize the word "*cat*."

This rigidity still prevails in some places. Within a month a letter came to my office from a superintendent saying: "I am re-arranging my course of study. I hope soon to have my schools so well in hand that every teacher will do on each day of the month exactly what I have planned for her." Comment is unnecessary.

It is proper to say here that the *tendency* now is in the other direction. Superintendents and teachers have discovered their mistakes and are rapidly correcting them. The rigidity of ten or even five years ago is now the exception rather than the rule.

In many places promotions occur regularly twice a year; and in most places individual promotions take place whenever it becomes apparent that a child can do the work of a higher grade with more profit to himself. A superintendent of one of the larger cities of the state told me a few days ago that last year he promoted at irregular times more than two hundred pupils.

Teachers are now, as a rule, allowed great freedom as to methods of teaching, and are simply held responsible for results. For sufficient reasons pupils are excused from a part of their grade work. The automatic movements and death-like quiet, formerly so much extolled, especially in primary schools, have given place to the greatest possible freedom consistent with good study.

There are other defects that may be modified, but they can not be entirely rectified. A teacher with from forty to seventy pupils must of necessity deal with classes rather than with individuals. The personal instruction, the personal control, and the personal influence must in the nature of the circumstances be limited. Courses of study must be arranged, not for the weak, either physically or mentally, neither for the specially bright pupils, but for the *average* boy and girl—and there is of necessity urging forward on the one hand and holding back on the other. These defects are inherent in the system, and must remain, in part at least, until the people are willing to furnish more money with which to increase the number of school houses and employ more teachers.

2. *It is charged that the instruction given in the schools is not "practical."* That the pupils are taught rules and books, but not principles which they can utilize in the affairs of life.

This charge is true in part, and false in part. It is true now, and always has been true, that too much time is devoted to technicalities and abstractions, and not enough to the things that enter into every-day living. Time that should be used in practical drills in the *use* of language is spent in parsing and analyzing peculiarly constructed sentences, or in construing the infinitive which we never misuse and always understand.

In arithmetic, time is spent in solving problems in alligation alternate, cube root, equation of payments, mensuration, or in gaining other knowledge that not one person in a hundred has occasion to apply once in a life-time, which should be devoted to the mastery of those principles that underlie and involve all the business relations of common life.

In geography, time is spent in locating small rivers and towns and bounding divisions of Africa and Australia, that should be devoted to the study of our own country, and especially our own state.

But truth compels me to say that in all these regards the schools of to-day are a marked improvement over the schools of the past. Within ten years great progress has been made. A great many books have recently been written on "Language

Lessons," "How to Speak," "How to Write," etc., etc., all intended to give practical drill in the use of language, and to precede and supersede the study of technical grammar.

Modern arithmetics omit entirely or treat very briefly the less important, less used parts, and devote the space thus saved to a fuller exposition of the practical parts.

Geographies now devote most of their space to the United States, and then prepare a special edition for each state.

The tendency is in the right direction.

3. *It is charged that the public schools neglect the moral training of the child—that they are "ungodly."*

This charge is positively and unqualifiedly false. It is usually made by persons interested in parochial schools, and who mistake sectarianism for christianity. Every element in a well-regulated school tends to develop moral character. Promptness, industry, courtesy, self-control, respect for the rights of others, thoroughness, cheerful obedience, intelligence—all emphasized by the school—are essential alike to the good citizen and the moral man—and the religion that does not include all these needs re-modeling. There are but few schools in which, in addition, there is not positive moral instruction given, both directly and indirectly, as lessons and conduct of the schools give opportunity. Furthermore, in most schools the Bible is used in connection with the opening exercises, which are conducted for the express purpose of cultivating the higher spiritual nature.

The genius of our school system demands moral training. The only ground upon which the state assumes control of the schools is, that by so doing the rising generation may be made better citizens than if left to individual influences. Intellectual training, of itself, does not insure better citizenship; moral training does insure it—hence the demand placed upon the teacher. The great bulk of the teachers are conscientious in this work, and are doing it as best they can. The fact that some who go out from the schools are immoral is not necessarily against the schools. We do not condemn the church and the preacher because now and then a member cheats his neighbor, defrauds the government, or degenerates into a sot.

The average age at which children leave school is about 13 years, and those who become the criminal class leave much earlier. Statistics are overwhelming to the effect that criminals are *usually* ignorant, and therefore have been under the influence of the schools very little, if at all. Could all the children be kept in the schools a reasonable length of time, and could the influences out of the school be made as healthful as those in it, society would be revolutionized in two generations.

4. *It is charged that the public schools jeopardize the health of the pupils—(a) by improper ventilation, heating, etc.; (b) by over-work.*

There is truth in the charge that most school-buildings are imperfectly ventilated and heated. The advantage of the old log school-house with its puncheon floor, over the modern brick building, is that the log-house was always "well-ventilated," and the brick is generally not. The heating also is usually bad. As a rule the temperature at the floor is several degrees colder than it is three feet above the floor. As a consequence, the teacher's only chance of observing the physiological rule, "keep the head cool and the feet warm," is to stand the children on their heads. Not unfrequently the rooms are insufficiently lighted, and thus the eyes are injured. These defects are by no means universal, but they are too general, and the subject should be agitated till every school-room in the land is well-ventilated, well-heated, and well-lighted.

The practice some physicians have of charging all the ills that child-flesh is heir to, upon the schools, is outrageously unjust. It is a fact that should be noted, that persons who have nothing to do with the schools *sometimes* are ill. The air, the food, the dress, the irregular habits of eating and sleeping *at home* sometimes affect the health of children.

Why, the president of a Wisconsin medical society in a public address not long since, held the schools responsible for the "flat-chested women who seem to have no other aim in life than to cultivate small hands, small waists, and small feet." If the doctors would do half as much as the teachers are doing toward creating a healthy public sentiment in regard to proper dress and the *preservation* of health, community would be much better off

than it is. If the facts were known, the teachers of Indiana are to-day, doing more to enlighten the public, than are the doctors of all the schools combined. Teachers seek to remove causes by lessons in hygiene; *doctors* experiment upon the results of broken laws of health. It is right that the schools should bear their full share of the blame, but it is unjust to make them wholly responsible.

(*b*) The statement that children are *over-worked* has but little if any foundation. It is doubtless true that, now and then, a child of peculiar nervous temperament, or of weak physical constitution is injured by over-work; but this is the rare exception. Any one who has attempted to teach children, knows how difficult it is to secure close attention or close study for any considerable length of time. Given plenty of fresh air, a proper temperature, good light, a sufficiency of bodily exercise and enough sleep, and not one teacher in a hundred, with a school of 40, has it in his power to over-work the average boy and girl. The evils charged to over-work are usually attributable to violations of physical laws.

The "large number of studies" commonly complained of, in this connection, has no bearing. It is doubtless true in some instances, that the time of children is so cut up among different branches that no one thing is thoroughly taught; but these frequent changes have a tendency to prevent rather than augment over-work. The mind of a child naturally turns quickly from one thing to another, and the greatest danger to the child comes from compelling it to attend too steadily to *one thing*.

The exact number of studies that a child may carry on at the same time with most profit, is undetermined. The age of the child and the nature of the studies have much to do with it. The general rule is "the older the child the fewer the studies." The experience of ages has fixed *three* as the most profitable for the college student.

The mistake that has been made, and that is yet being made in primary schools is, that just as much time and strength of pupil and teacher have been devoted to drawing, singing, oral lessons, etc., as to reading, writing, and numbers. This ought

not so to be. The three R's, comprehensively taught, are the foundation, and in many cases will constitute the whole structure, and therefore should occupy the chief attention. Everything else should be secondary and subservient. Each succeeding step should be taken, not so much with reference to the next higher step, as to the fact that the next step for the child may be out into the world.

(To be continued.)

DEPARTMENT OF PEDAGOGY.

This Department is conducted by GEO. P. BROWN, President State Normal School.

LEARNING AND REMEMBERING.

✓
MR. BAIN says that the principal functions of mind which are employed in intellectual acquisition are, (1) *Concentration*, or the focusing of the attention upon the thing to be acquired. (2) *Will*, which produces this concentration of mental energy. (3) *Interest*, or *Feeling*, which stimulates the will. If the teacher would lead the child to make any acquisition that shall be of educational value to it, he will first seek to awaken an interest which shall result in a desire to make the acquisition. This stimulates the mind as will to put forth the necessary effort to gratify this desire. The sequence of mind activities would then be, (1) *Feeling*, either sensation or emotion; (2) *Will*; and (3) *Intellect*. This makes Will and the consequent intellection dependent upon Desire, and Desire dependent upon the influence of motive. From this point of view one of the most important chapters in educational psychology is that which makes a thorough analysis of the motives which influence the soul to action.

It is probably true that the soul that is complete master of itself, can by sheer force of will hold the intellect to the work of acquisition or elaboration of knowledge without any conscious interest attending the exercise. A biographer of Mr. Garfield says that he at one time expressed great anxiety about his mental

condition because he found himself unable to hold his attention to subjects in which he had no interest. He threatened to abandon his political career and take a course of training in some German University unless he should be able to make his intellect subservient to his will as formerly. But it is vain to expect of the child such self-control. He must be influenced by motives, and the highest duty of the teacher is to fix in the mind of the child the highest motive possible that shall command his conduct.

Having made a thorough study of the nature, power, and moral influence of the different motives by which the will is stimulated to act, and of the conditions under which each motive will stimulate the will the most, the next subject of study is those great functions of the intellect employed in the acquisition of knowledge. These may be termed the power of individualizing, of generalizing, and of retaining. All of our intellectual possessions may be divided into two classes. One of these is our knowledge of individual or particular things. Each thing is distinguished from every other by its differences from every other. It is an individual because of these differences. The mind that could see only differences might know a great number of individual things, but it would see them as isolated. It would never be able to form them into classes and thus reduce to order this class of things, but would be confused and lose itself in the multiplicity by which it found itself surrounded. But this distinguishing of differences is the first power exercised by the child. His first act that may be called an act of knowing is an act of discrimination,—a seeing of one thing as different from another.

Our other class of intellectual possessions is our knowledge of generals. The mind has the wonderful power of seeing things not only as manifold, but of reducing this manifoldness to unity. It is able to see "many in one" and "one in many." This oneness or common property or element that is found in all is a *general*. All of a large number of objects very different from one another in appearance may have one common purpose, and because of this agreement each is called a *chair*. What has been named *chair* is not any one of the individuals, but that which is common to all the individuals. All the nouns in our language

are for the most part names of such generals, and not the names of individuals or particulars. Proper names may be said to name individuals, but they were all originally the names of generals, and it could be shown that each in its present use is the name of a general rather than of a particular.

The function of discrimination is especially active in childhood. The power to generalize ripens with age. The chief function of the teacher of the intellect, is to lead it onward from the exercise of the voluntary and natural power to see differences, and from the study of individual things, to the seeing of agreements and the grouping of these things into higher and more comprehensive unities.

[*To be continued.*]

THE PURPOSES OF EXAMINATIONS.

SCHOOL examinations have their uses and their abuses. I propose to speak of the former. The first use of the examination is to test the pupil's knowledge. To know what is and what is not known by the pupil is of primary importance to the teacher. But the teacher can not rely upon stated, formal examinations for his knowledge. It is the daily examination of the recitation room that gives it best.

But the written examination will oftentimes reveal points of weakness which the oral recitation failed to discover. If the questions are framed so as to cover the fundamental and essential ideas of the subject the examination may result in great good to the pupil.

In case examinations are given to test knowledge, the method of questioning will differ, if the teacher is the interrogator, from what would be adopted by a person ignorant of the pupil's attainments. The teacher knows what have been pressed as the important thoughts in the study of the subject. He will know what questions to ask to test the pupil's knowledge of these.

He who is a stranger to the exact course of instruction pursued may construct two or more questions bearing upon one part of

it and give the pupil the privilege of choosing which question of the group he will answer. This affords more chances to the pupil to tell what he knows without that embarrassment from the strangeness of form or thought which a single question may carry with it. Of course the examiner needs to be a thorough master of the subject to know what questions to ask to cover all of the probable ways of treating each topic.

By the one method, therefore, if the pupil is to write ten answers there will be but ten questions. In other words, the examiner determines for him what questions shall be answered. In the other case thirty or forty questions may be asked in groups of three or four each, and the pupil allowed to choose one from each group.

Questions designed to test knowledge are appropriate when the teacher, being ignorant of the attainments of the child, wishes to determine to what grade of advancement he shall be assigned, or when, having completed a subject or a branch of a subject, the teacher wishes to test the ability of the pupil to pass on with his class.

But it is a mistake to limit the purposes of the examination to these.

The examination may serve the purpose of instruction by showing to the pupil the limits of his knowledge and suggesting what should be learned. It gives also practice in self-directed and consecutive thought. In the recitation the pupil's thought is directed by the teacher at every step. In the examination he is required to direct his own thinking within the general limitations of the question. This practice in independent consecutive thought may be indefinitely expanded by modifying the character of the questions. The question may require merely an exercise of memory of facts or processes previously experienced, or it may demand new and original combinations of the pupil. The one is the test of knowledge merely; the other is a test of his power to use knowledge in forming new products. It is also a stimulant to the exercise of this power.

Examination questions may be instructive in that they suggest new lines of thought and study to the pupil. An attempt to answer them discovers to him how narrow are the boundaries of his knowledge, how vague and indefinite are his ideas about it, and point out to him a path for investigation.

This assumes that questions may differ very much as to their nature and purpose. In our next we will consider the different kinds of questions and the characteristics of a good question.

WHAT IS A LIBERAL EDUCATION?

WITHOUT doubt the young reader of the Journal who is thoughtful has more than once asked for a definite answer to this question. The term has for a long time been associated with a classical education, by which is meant a knowledge of the Greek and Latin languages and their literature. But we will come to a truer signification of the term by reference to its root meaning.

It is, in general, the most satisfactory mode of procedure in every case in which a term has for a long time passed current, amidst many changes of thought, to determine its meaning by the aid of the etymological signification of the word. A liberal education is an education that makes one *free*. This is its literal significance. Freedom from the limitations of the ignorance and the mental and moral weakness common to men in any age is a liberal education for that age. This knowledge and power have for generations been held to be the result of the study of the ancient classic languages and mathematics; and so it has come about that one who has pursued these studies to a certain extent, the standard being fixed by the college curriculum, is said to be liberally educated.

But reflection will make it appear that a liberal education in the original sense of the term, has no necessary dependence upon the study of the Greek and Latin languages. A person may be liberally educated and know but little of either of these. He may know these thoroughly without being liberally educated.

He is liberally educated when he is relatively free from the limitations imposed by ignorance and mental and moral weakness. Knowledge and power are the two essential ingredients of liberal education: the knowledge that is of the most worth in giving the data for the solution of the practical problems of life, and the power to use these data and solve these problems.

Any course of study that gives this knowledge and develops this power is a liberal course of study. A liberal education is what every teacher from the primary school to and including the university should be striving to lead his pupils to acquire. Whether he shall make a special study of Greek or Latin must be determined upon grounds similar to those that would decide whether he should make a special study of science, or mathematics, or even medicine or law,—that is, the use to be made of this special knowledge. The entire circle of sciences, including the science of language, is needful to a liberal education in its fullest sense, for it takes them all to give that training of which the soul is capable. It is only by exercise in these various lines that all of its potentialities can be made actual.

But it is a false notion that one kind of partial education, that given by the study of Greek and Latin, is a liberal education, and that all education resulting from other studies is illiberal. Some of the best examples of liberally educated men in the country have only the most elementary knowledge of the Latin and Greek languages.

THE STUDY OF WORDS.

THE full order of presenting words might be indicated as follows:

1. Simple primitive words.
2. Derived words.
 - a. Saxon and Latin affixes.
 - b. Saxon prefixes.
 - c. Latin prefixes in their various forms.
 - d. Roots.
3. Those modifications of the forms of words that result from the tendency in persons to employ the least amount of energy requisite in pronouncing words.

In a previous article it was said that in the work of the pupil during the first three years, he would be dealing, in the main, with primitive words, and that he should be made familiar with them by the method of *illustration by example*, in which method, the thing, action, or quality denoted by the word, is always submitted to the pupil's observation, or verified from his experience at the time the word is studied.

There are three processes of explaining a word, besides definition. These are: explanation proper, which consists in stating the idea in the simplest language; illustration, in the strict sense; and the one referred to, illustration by example.

These processes could be viewed thus:—

Methods of Explaining. $\left\{ \begin{array}{l} 1. \text{ Explanation proper.} \\ 2. \text{ Illustration.} \left\{ \begin{array}{l} a. \text{ Illustration proper.} \\ b. \text{ Example.} \end{array} \right. \end{array} \right.$

A clearer idea may be gained by considering specific cases. If, in explaining the meaning of the word *bank*, one should say, "a bank is a place where money is kept, and loaned," the method would be *explanation proper*. If, however, in explaining its meaning, the attention should be called to a picture showing the officers at their places and busy; or if the language of metaphor or simile should be used in explaining it the method would be *illustration proper*. To explain the meaning of the word by taking the pupil to some banking establishment and pointing out the different transactions, would be to use the method of *illustration by example*.

In explaining the meaning of the word *calyx*, when it is said, "the calyx is the outer covering of a flower," *explanation proper* is used; when the calyx is spoken of as "the leaf-like covering of a flower," or "the cup in which the flower is held," or when its form and position are shown by a drawing upon the board, or by any pictorial representation, *illustration proper* is used; when the calyx itself is shown to the class at the time the word is considered, or when the experience of the class is appealed to at the time of explaining the word, *illustration by example*, or *example* in the strict sense, is used.

This last method is requisite in dealing with primitive words, during the first three or four years. All three methods, however, may be used in any grade, and in the advanced grades the method of definition may be added.

If all the methods indicated are to be used, the order should be, if practicable:—

1. Explanation proper, or the expression of the idea in the simplest language.
2. Illustration proper.
3. Example.
4. Definition.

This order is in accord with the well-known principles of mind that exercise is the law of mental growth; that acquisition is best made when there is a steady increase of interest in a lesson; and that the natural procedure is from concrete to abstract. For it is held to be obvious that the imagination is called into activity much more by the order 1, 2, 3, as given above, than it would be by the reversed order, 3, 2, 1. It is also clear that with the order 3, 2, 1, the interest would be constantly decreasing; and that any modification of the order indicated that would change the time of treating a word by definition, would be a procedure from abstract to concrete.

It has already been stated that there are five things to be done in studying affixes and prefixes, i. e., to obtain the meaning of the primitive word; to have the difference between it and the derived word pointed out; to obtain other words in which this difference is found; to determine their meaning; to infer the meaning of the affix or prefix, which constitutes the difference between the primitive and the derived form.

In considering the different forms of a single prefix, the mode of procedure is similar, involving observation, comparison, and inference. Thus there would be:—

1. The *observation* of a group of words, as, adduce, ascend, accompany, affix, aggress, alloy, animadvert, applaud, assign, arrive, and attain.
2. The *comparison* of the forms of these words, in order to show that *ad* appears in the forms, *ad*, *a*, *ac*, *af*, *as*, *an*, *ap*, *ar*, *as*, and *at*.

In like manner the groups of words in which particular prefixes occur, would be observed, and then compared in order to determine the separate forms of the given prefix. Such a course of observation and comparison would make the pupil familiar with all the varieties of the different prefixes, thereby preparing him for—

3. The *inference* as to the principle on which the change of form is based, i. e., that persons are inclined to expend the least amount of energy requisite for the pronunciation of a word, and that to make similar any two diverse sounds, is to lessen the energy required to produce them. This will be followed by—

4. The *memorizing* of all that has been gained concerning affixes and prefixes.

At this stage the task assigned to the memory will not be severe, because its exercise will now be based upon, and aided by, the previous exercise of the powers of observation, comparison, and inference.

In all work upon words, the teacher should hold in mind the principle that *the time to commit to memory a list of words, affixes, prefixes, or roots, is after, by observation, comparison, and inference, the pupil has made himself familiar with the individual words, affixes, prefixes, or roots.*

HOWARD SANDISON.

ENGLISH GRAMMAR.

GRAMMAR has been defined as the subject which has to do with language simply as sentences, and its whole object as a language branch must be sought through the study of this form. The term *study* is here used to include all work upon the sentence, as such, of whatever kind; whether the mastery of textbook statements of the principles and rules of sentence construction, drill in correcting errors and in making original sentences to fix correct habits, or the study in detail of the mass of facts generally included under the terms classification and inflection.

THE SENTENCE AND THE THOUGHT.

The sentence is a word or group of words expressing a thought. This is the *meaning* of all definitions of the sentence, whatever

their form, and it is the logical beginning of the subject of Grammar. But the definition is meaningless unless the term *thought* suggest to the learner a definite thing, the nature and elements of which are clearly and distinctly known. The judgment or thought is the fundamental product of mind, the sentence is the unit of discourse; we think in judgments, as we write and speak in sentences. Stated still differently: all results of thinking, however complicated, can be resolved into separate judgments; in like manner, all discourse can be analyzed into sentences. There can be no intelligent study of the sentence, unless this vital relation between it and the product it expresses be constantly kept in mind. The thought must explain its form.

What is a thought? It is the mental product resulting from the assertion, by the mind, of a relation between an object and an attribute, or between two objects. Thus in the thought, "Trees are plants," a relation is affirmed between the objects "trees" and "plants," a relation of whole and part—"plants" being the whole, "trees" the part. In the thought, "Snow is white," the elements are similar except that an object, "snow," is thought in relation to an attribute, not another object. This relation is called that of object and attribute. In the thought, "That man is James," the relation is one of entire agreement or identity. The parts of the thought, then, are (1) the object of which the mind thinks or asserts something, called the *subject* of the thought; (2) the object or the attribute in relation to which the subject is viewed, called the *predicate*; and (3) the connection (of whole and part, object and attribute or identity), which is seen to exist between these parts, called the *relation*. By turning the mind in upon itself and observing what materials are present and what the mind does with them when it thinks, it will be seen that these are the *necessary* elements of every thought.

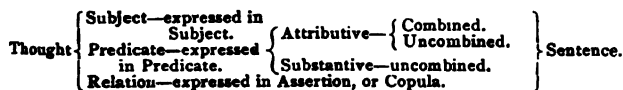
Since the sentence is the verbal expression of the thought, and the thought has been shown to have three elements, the sentence must have three, namely, (1) that which expresses the subject of the thought, called the *subject* of the sentence; (2) that which expresses the predicate of the thought, called the *predicate*; and (3) the word or words that express the relation, called the *asser-*

tion, or copula. These are the necessary elements of every sentence, though, as will be shown further on, each thought element does not always have separate expression in the sentence.

KINDS OF PREDICATES.

It has been said that, in forming the thought, the subject is seen to be related either to an object or an attribute. Accordingly as this second thought element is an object or an attribute, the predicate of the sentence is classed as *substantive* or *attributive*. This division of predicates, though simple, will be seen to be important when the subject of modifiers is considered. The substantive predicate, whether in form a word, phrase, or clause, always stands uncombined with the assertion. The attributive may be uncombined—in which case it is adjective, or it may be combined with the assertion—when, of course, it is a verb.

The following diagram will present to the eye the points discussed above :



PRIMARY DEPARTMENT.

[This Department is conducted by LEWIS H. JONES, Prin. Indianapolis Training School.]

SCHOOL ORGANIZATION.

ORGANIZATION is of many kinds and of various degrees. Christ typified the organic spiritual relation of Himself and his disciples, by the concrete example of organization presented by the vine and its branches. This illustration, like most of the instruction of the Great Teacher, is noticeable in two respects; viz., first, for its bold, impressive, metaphorical character to the uncultured hearers; and second, for its fine suggestiveness to the thinker, and its full accord with the very first principles of the subject thus illustrated. It is in this latter view that I propose to consider it, in order to apply afterward the philosophy sug-

gested by it to the subject of school organization. It will readily be seen, therefore, that this is not the study of the same lesson as that upon which Christ was engaged, but the development of *a theory of organization as suggested* by the thought there embodied, and by the character of the figure used in its enforcement. It is proposed, further, to bring to bear on the enlarged illustration all the added force to be derived from the clearer knowledge which the science of botany has given in later times with respect to the organic relations and functions of the parts of plants:—for whatever may have been Christ's knowledge on the subject, it is plain that any learned discussion of vegetable physiology would have been worse than useless to the men who composed at that time his audience.

Take, as the type of vegetable life, a tree. The significant parts of the tree are root, stem, and leaf. It is in the functions and relations of these parts, then, that we are to look for those analogies which are to be instructive to us in our thinking on school organization.

It is the function of the root to absorb from the earth such substances as can be made serviceable by the plant as *food* for itself. This food-material consists of water holding in solution many gases, and some earthy substances. It passes without any chemical change through the thin walls of the youngest or outermost cells, particle by particle, and collects by cohesion within the cells into the circulating medium or crude sap of the tree.

It is the function of the stem to carry this crude sap, by a similar passage through cell walls, from cell to cell, to the leaf, where the great chemical change converting *crude* sap into *elaborated* sap takes place; and to carry in similar manner the elaborated sap backward to those parts which may need it in growth. The principle of this movement will be explained immediately after the function of the leaf has been described.

It is the function of the leaf to carry on the great chemical change of the *crude* sap into *elaborated* sap, sometimes called vegetable *digestion*. The cells of the leaf contain chlorophyll, the substance which gives the green color to the living leaf, and when crude sap flows into cells containing chlorophyll, and upon

which the sunlight strikes, the change takes place. Some of the water is decomposed, and from the gases thus derived and others which were held in solution in the water, *new, organic, vegetable* substances are made,—such as cellulose, proteine, etc.

Portions of the water not needed are evaporated from the surface of the leaf. The earthy substances mentioned, mainly stay in the cells, thus making the resulting fluid in the outermost cells of much greater density than that in the cells below.

Here then appears the first requisite to the constituting of the tree an organism; viz., *the assigning to each significant part of the tree—root, stem, and leaf—a separate and distinctive function.*

A few thoughts on the circulation of the sap in a tree, coupled with the above facts, will give us our basis for the study of the analogies between the *tree* and the school.

The principle or agent of osmose governs the circulation of the sap in the tree. *Osmose* is the “tendency of two liquids of different densities, when separated by a membrane (as of a cell-wall), to mix by a reciprocal flow of some of each into the other.” Its *law* is that the greater flow is toward the denser fluid. The *condition* for its working in a living tree is the fact that the fluid in the cells of the leaf is denser than that in those next below, and that in those, denser than that in those next below, etc., etc. In the above beautiful combination of agent, law, and condition, will be found the explanation of the carrying in one single stream, the crude and the elaborated sap to every living part of the tree. But it is to be noticed that this *condition* of greater density in the outer cells of the leaves only occurs when *the leaves are busy at their own proper work*;—namely, *evaporating water and changing the crude sap into elaborated sap.*

If the leaves of a tree should cease to perform their distinctive function, the fluid in their cells would not long continue to be so much denser than that in the cells below; soon, therefore, the circulation of the crude sap (containing also the elaborated or food-sap) would cease, and no food would be brought to the leaves, and they would die of starvation. Here, then, is suggested the second step in constituting the tree an organism,—*each organ receives its own life and continued prosperity by doing its own distinctive work for the good of the whole organism.*

This relation of *organ* to *organism* would be found to hold true of the other two organs of the tree—root and stem—if we should investigate the laws of their working.

If a single leaf discontinue its work, the effect on the life of the tree is slight. But let each leaf cease its work, and the tree must eventually die of starvation; because no part of the tree (except the green bark of very young plants) can digest the crude sap and turn it into the elaborated sap, fit for assimilation. Here, then, appears the third great fact in the constitution of the organism;—viz., *the life of the whole organism is dependent on the proper performance by each organ of its distinctive function.*

If one will observe the various degrees of prosperity in the leaves of the different trees which he sees, he will be impressed with the fact that the leaf prospers most on those trees that are in every other respect most thrifty. Thus appears, without much illustration being necessary, the fourth and last of the great facts of organization which it is the purpose of this paper to investigate;—viz., *the best results to any organ can only come through the realization of the purpose of the whole organism, and its consequent prosperous condition.*

This complete inter-dependence of the parts upon the whole, and of the whole upon the parts, is the great fact of organization; and the parts so related are organs, and the whole so constituted is an organism.

When the parts so related are vegetable, the organism is a plant; when the parts so related are of animal matter, the result is an animal. But when the parts out of which the organism is made are human souls, the resulting organism is some human institution, dependent for its special character on the purpose which it is to realize, and upon the peculiar relation in which its organs stand to one another.

Metaphorically, then, the school is a tree; literally, it is a human institution, organized by human thinking, with definite purpose to realize, and specific relations of its organs—the *teacher* and the *pupils*.

Before entering upon the philosophical discussion of the school as an organized product of thought (which must be reserved for

another paper), it is well to draw some of the lessons which are suggested by the likeness of the school to the tree.

It is the distinctive business of the pupil *to learn*. Unless the pupil performs this work *himself*, he can receive but little real good from the school. This idea of the necessity of *self-activity* in the pupil should be duly regarded by every teacher in organizing a school. Show pupils a branch on which the leaves are withered because the connection between the leaves and the stem and root has been severed, and the leaf can not therefore do its work, nor receive its benefit from the whole tree.

In like manner the teacher and pupils must coöperate in order to the perfect prosperity of the whole school; for only when the school as a whole is prosperous, both pupils and teacher can receive most benefit from it. Many other similar lessons might be drawn from a continued study of the school as a tree.

WHAT IS IT TO "EDUCATE" ?

IN the light of the derivation and literal meaning of the word "educate," many have sought to find significant ideas in respect to the true nature of the process which this term indicates with respect to the pupil. Most of these inquiries have ended with the conclusion that to educate a child is "to lead out his powers," by self activity; "to develop his faculties," etc. These suggestions are full of meaning to the teacher, but do not encompass the whole significance of the word nor hold all its historic associations.

From the same Latin root from which this word is obtained, comes also the Latin word *dux*, which is commonly translated *guide, leader*; because, perhaps, neither of these words alone gives the whole meaning as it was found in the old tongue, but each expresses a phase of the many-sided character to which the term was applied.

First, then, to educate a pupil is to be to him a *guide* in the unknown regions of thought, emotion, and choice,—i. e., a guide to him in the possible experiences of a student. It is the

business of a guide to show to those under his charge whatever is most interesting and important in the region traversed. The stranger may wander near the sublimest wonders, or the most enchanting beauties, of the natural world, without being aware of their presence; or, at least, without knowing the best way of reaching them. The guide not only tells the traveller what is best worth seeing, but conducts him to it by the safest, pleasantest, and most direct route. How many teachers there are among us who prove themselves *poor educators* by leaving their pupils wholly ignorant of the best and purest experiences possible to the student! How few, on the other hand, can direct the pupil to the choicest fountains of thought and emotion, in which he may refresh his spirit! or to the mounts of vision from which the truth may best be seen!

Again, in an unknown land, there are hidden dangers, known only to the experienced guide. See the responsibility assumed by him who undertakes the care of the property and person of another as his guide. Many an Alpine guide has proven his fidelity to his trust by the sacrifice of his life in the service of those who had confided in his care.

The hidden dangers of school-life to the child are many, and the tendency of the inexperienced is to rush heedlessly into them. The true *educator* is ever on the alert to save his pupils from the consequences of needless risk.

Second, then, to educate a pupil is to be to him for a time a *true leader*. A true leader inspires those who follow with confidence and courage; elevates their ideals of achievement and character; and develops in them the courage and fortitude necessary for the conflict. He is a perpetual fountain, giving out influences that revivify all, giving motive to those who lack, honorable pride to those who have none, bright purposes and prospects to those who are hopeless, making life seem significant and worthy.

When Napoleon said to his soldiers in Egypt, "Forty centuries look down upon you from those pyramids," and Lord Nelson, at the commencement of the battle of Trafalgar, said, "England expects every man to do his duty," each exemplified

the quality of a great leader. In the struggles which followed in both cases, each soldier was conscious of a personal worth which he had not known before.

Fellow-teachers, are you *true educators*?

PRIMARY ARITHMETIC.

W. H. BLANCHARD.

AN article in the June number of the Journal leads me to call the attention of mathematicians to the use of the terms tens, units, hundreds, thousands, tens of thousands, etc., which are used so prominently in the opening sections of written arithmetics and then disappear forever. I will state at once that I consider them "useless lumber," and in fact worse than that, for they are in the way, and much time is wasted in learning to use them.

We say "fifteen," and not "one ten and five units." A cow does not cost six tens and four units dollars, but sixty-four dollars. In adding we say forty and thirty make seventy, except the poor arithmetic makers who feel obliged to say that it is necessary, in order to "explain" the subject, to say four tens and three tens make seven tens and seven tens equal seventy. Why not come to it immediately, and not go around Robin Hood's barn?

Well, you will say, how would you do? I will tell you. But first let me remind you that we shall not add, subtract, multiply and divide *figures*, but *numbers expressed by figures*; and that we have figures of the first order, second order, third order, etc. Let us add 768 and 425, which we will read as seven hundred sixty-eight, and not seven hundred *and* sixty-eight, which is correctly written 700 and 68, or two numbers. Also read four hundred twenty-five. Five and eight make thirteen, three of which I represent by writing the figure 3 under the figures of the first order and retain ten, not *one ten*, to be added with the numbers expressed by figures of the second order. Ten and twenty make thirty, and thirty and sixty make ninety, which I

represent by writing the figure 9 under the figures of the second order. Four hundred and seven hundred make eleven hundred, or one thousand one hundred, and I represent one hundred by writing the figure 1 under the column of figures of the third order, and express one thousand by writing the figure 1 at the left in the fourth order, and the sum is one thousand, one hundred ninety-three, instead of one thousand, one hundred, nine tens and three units, as poor children are taught.

But you will say that in practice we say five and eight; well, so do I. And you add two and six and one; so do I. You add four and seven; so do I. So now what advantage or need of using these useless terms? I would like to make the acquaintance of the man who invented the method of changing simple numbers to denominate numbers for "purposes of explanation." I think I should give him "a piece of my mind." In subtraction, multiplication, and division I could show that the same is true, "only more so." I would never let a child hear of tens, hundreds, etc.

While I am "up," I would say a few more "sassy" things. We are told that "Subtraction is the process of finding the difference between two numbers," or "taking one number from another." I hold that subtraction is the process of taking from a number a part or all of itself to find what may be left. You can not take one number from another any more than you can take one book from another. You can take away a part or all of a load of wood, but you can not take one load of wood from another till you have first added it to the first load.

The Minuend is the number from which a part or all is to be taken. The Subtrahend is the number which shows how much of the minuend is to be taken. The Remainder is a part of the minuend.

"Division is the process of finding how many times one number is contained in another." Sometimes it is, and then again it is resolving a number into a proposed number of equal parts. The Dividend is the number which we wish to find how many times the divisor is contained in; or it is the number to be resolved into a proposed number of equal parts. The Divisor is

the number which we wish to find how many times the dividend contains; or, it is the number which shows into how many equal parts the dividend is to be resolved. The Quotient is the number which shows how many times the divisor is contained in the dividend; or, it is one of the equal parts of the dividend. These definitions are exact; but in how many books can they be found?

Perhaps this will be a large enough dose for once, and doubtless some will feel like taking up the cudgel. If so, I only say, "Lay on Macduff."

WALPOLE, N. H.

THE TEACHER.—No man has greater need of cultivating every Christian virtue, and of being a living, everyday example of all that is noble, discreet, and good, in speech and deed, than the educator of young men and women. It has been said of some ministers that they should not leave the pulpit after they are in it, nor go into it again after they are out of it. The saying applies to teachers as well as to preachers. Both classes of men have need so to govern themselves as to say and do only what is courteous, considerate, and just. The teacher who suffers the spirit of gross indiscretion to take possession of him only damages himself—in the estimation of every intelligent pupil committed to his care, and of every thoughtful friend of the institution with which he is identified.

OFFICIAL DEPARTMENT.

[From the Letter-Book of the Superintendent of Public Instruction.]

TRANSFER OF SURPLUS DOG TAX TO SCHOOL REVENUE ACCOUNTS.

[Letter Book G, p. 332.] I think the township trustee may transfer to the school revenue accounts the surplus dog-tax before the August meeting of the county commissioners, and embody the amounts in their reports to them and to the county superintendents, subject, like all their other accounts, to revision and correction by the commissioners.

PERIOD COVERED BY TRUSTEES' REPORTS TO CO. COMMISSIONERS.

The report to county commissioners made by the school trustees must this year begin with the date at which their last year's reports ended (that is, the first Monday after the second Tuesday in October, 1882), and cover the period from that time through July 31, 1883. Hereafter both reports (the one to the county superintendent and the one to the commissioners) will cover the same year, from August 1st to July 31st, inclusive.

INSTRUCTION IN GERMAN ON PETITION OF PATRONS.

[G, 334.] The school law provides that instruction shall be imparted in certain studies, the German language under certain circumstances being included in the list. The time at which these studies shall be commenced, the order in which they shall be taken up, and the length of time devoted to each, are matters which must be left to the board of trustees. It is the duty of the board to act upon a petition asking that instruction be given in the German language, if such petition conforms to the requirements of the law, but to act in the way which, in their discretion, seems most practicable.

NEW SCHOOL BOARD ELECTS TEACHERS.

[G, 335] From the fact that a reorganization of the board, and a renewal of bonds of all the members are required each year, it is evident that the law regards the board after such change as a new and different board, though it may be composed of the same men, and as a rule, two of the three will be the same. As a general principle, a board or an officer is bound by the official acts of his predecessor, if within the powers conferred by the law. But it is not reasonable to suppose that a board is empowered to make contracts and arrangements for carrying on any business which its successor would have abundant time to provide for. The new board is to conduct and manage school affairs from the time of its organization, and to it should be left the selection of the teachers who are to be its employes. I am sustained in this view by the published opinion of a former attorney-general.

VOTERS AT SCHOOL MEETINGS.

[G, 339.] The law does not give school patrons the right to select teachers. Voters at school meetings for other purposes are all taxpayers, except married women and minors, who are listed by the trustee as parents, guardians, or heads of families, and attached to the district in which the school meeting is held.

RENEWAL OF LICENSES.

[G, 334.] The teacher's license law, as amended by the last General Assembly, does not provide for the issue or renewal of any

licenses without examination. The amended law took effect June 10, 1883. Renewals without examination, made since that date, are invalid

ILLEGAL ISSUE OF LICENSES.

[G, 345] The law has never authorized the renewal, without examination, of teachers' licenses, except when two twenty-four month licenses had been held consecutively. When that condition was fulfilled, the superintendent was permitted, before the recent amendment of the law, to grant a renewal, "after the expiration of the last license issued." A renewal previous to such expiration is invalid. A license is a purely statutory right, and depends for its validity upon a strict compliance with the terms of the statute creating it.

If a new superintendent finds that licenses have been illegally issued by his predecessor, he should cancel the records and certificates thereof, and inform the school trustees in the county of his action. Before taking such action he should carefully investigate the facts, and notify the parties interested, giving them an opportunity to make explanations.

MEANING OF CONSECUTIVE LICENSES.

[G, 347] The provision of the law which creates the thirty-six-month and eight year licenses, contemplates that they should take effect consecutively, and not overlap each other in time. A person who has received two thirty six month licenses in succession, "may receive at the expiration of such several licenses a license for the term of eight years," upon passing a certain examination. The intention of the Legislature was to relieve teachers of approved skill and ability from the burden of frequent examinations. But the benefits of the eight-years "professional license" are carefully guarded, being extended to those persons only who have held consecutively a twenty-four-month license (heretofore issued) and a thirty-six-month license, or two thirty-six-month licenses. The period of the currency of these two licenses is designed as a trial period, in which the teacher may gain experience and prove his ability; and I think the law must be interpreted as not permitting such period to be abridged by granting the second or third license before the expiration of the one preceding it.

Yet the examination for such licenses may not improperly be held within a reasonable time previous to the expiration of the preceding one.

The above are selected from my recent decisions.

JOHN W. HOLCOMBE,

Sup't Public Instruction.

July 26, 1883.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

TIME OUT.

With this number of the Journal the time of more than a thousand subscribers to this Journal expires. The Journal never before had a larger subscription list, and never before was more universally commended. Expressions come from every side like these: "The Journal was never before so good." "The new Departments are a great improvement." "The Pedagogic Department of itself is worth more than the price of the Journal." "The Primary Department will be especially valuable to every primary teacher." "The Journal now combines the theoretical and practical more perfectly than does any other school paper published." Indiana teachers who wish to go beneath the surface of things and *grow* in their profession should read the School Journal."

It is hoped that every one whose subscription expires with this month will renew at once, and if possible send another name with his own.

The Journal wishes to renew its thanks to its many friends, and hopes to be able to continue to merit their hearty support.

The Journal is pleased to learn that notwithstanding the great calamity of the fire, the Indiana University at Bloomington will open at the appointed time. To all the old students and friends President Moss is sending the following:

"The opening of the University for the coming year will not be hindered nor delayed by the recent disastrous fire. Work will begin in all departments and in all classes on Thursday morning, September 6th. The old building is uninjured, and arrangements will be made whereby recitation rooms will be provided for all the classes, and all the Professors will be in their places. We confidently expect that you will be with us, and that no one who was preparing to come will be dissuaded from his purpose."

THE INDIANA UNIVERSITY.

The burning of the principal building of this institution, including the museum and library, was both a financial and educational disaster. Money can not make good the loss from the destruction of the Museum. It contained much that can not be replaced. It behooves the friends of higher education in the state to bestir themselves that a still greater disaster does not befall us. The greatest danger lies in the fact that there is a portion of our citizens who hold that higher education at public charge is contrary to the genius of our institutions, because so small a number of the youth of the state accept the opportunities offered. It is viewed as equivalent to legislating for a class and not for all, to furnish a college education to only a small fraction of the population, practically, although ostensibly free to all. In other words, because A, B, C, etc., to Z, either do not desire, or can not afford the time to avail themselves of the advantages for higher education offered by the state, it is held that Z, who does desire it, and can afford the time, shall not have the opportunity. These would limit free tuition to the common schools and instruction in the common branches of learning.

Such persons will now be active in their efforts to secure the abolition of the State University; or if not able to do that, they will try to so obstruct legislation as to render ineffectual any measures that may be adopted for its continuance. The state, through the last legislature, fully committed herself to the policy of giving adequate support to a free university, and she will hardly recede from her position because of an accident to which every institution in the state is liable.

There is another class of advisers who are also dangerous. They are those who favor a free university education, but do not distinguish between that and a technical education. They would make the Indiana University a sort of Annex to the School for Instruction in Agriculture and the Mechanic Arts, at Lafayette. With them about the only thing worth saving in the University is the scientific department, over which Prof. Jordan presides with such ability, and whatever humanity studies are tolerated must be taught by the "methods of science." In short, the method of observation and experiment is the only true method of study with them, and whatever knowledge and training can not be so acquired is held to be unworthy of the consideration of man in this scientific age. This is the spirit of materialism that recognizes nothing as real and true except what can be seen or handled or tasted.

There is a wide difference between the broad and liberal scholarship and training given by an institution that makes language, literature and history prominent subjects of study, and one which limits

its investigations to the natural world. The latter may give a more immediate and practical preparation for the ordinary industrial pursuits, but the former are necessary to give adequate preparation for the proper discharge of the duties of life.

But let us grant that the amalgamation of these two institutions would not affect injuriously the standard of literary scholarship heretofore maintained in the State University, and that the literary department of the "university system" would be the leading department as it is in every other great university. What then would be the effect upon the Department of Agriculture and the Mechanic Arts? It has always been the policy of the administration of Purdue University to adopt a course of study and a policy as far removed from that of a literary school as practicable. The argument presented by the Board of Trustees in favor of abolishing Greek Fraternities from the school, upon which greatest reliance was placed, was that they tended to distract the minds of the students from industrial pursuits and to encourage classical learning, which was unfriendly to the purposes for which the school was founded. To bring Purdue University into immediate union with a classical school which held the place of honor among the schools composing the university would be to greatly increase the tendency of students to abandon the study of industrial pursuits for the more alluring, and, to them, more honorable career of one of the learned professions. There are three vocations—mechanics, agriculture, and teaching—that present but few allurements, as yet, to young people. They see honor and emolument only in law, medicine, and literature. The ambitious and capable ones need the combined influence of the faculty, the fellowship of students having the same purpose, and the community to hold them to a preparation for the arduous and unattractive labor which the first three vocations imply. This, I take it, is one of the reasons why industrial schools and normal schools have seldom been combined with literary and professional schools in a university system.

Michigan University is often referred to as an example of what every state may have by uniting its educational institutions at one place. But every well informed person knows that neither the Industrial School nor the Normal School has any connection with the University in Michigan. To make a University like that of Michigan money must be furnished to equip it. Provide a system of literary and professional schools, fill the chairs with professors of acknowledged ability, and furnish adequate room and apparatus and library, and students will flock to an Indiana University as they now do to Michigan or Harvard. Indiana wants and should have a great university system of literary and professional schools. But it would be a criminal blunder to undertake to make a great university by combining

Industrial and Normal Schools with these. They have too little in common in the various purposes for which they were founded to make such a combination profitable.

A STEP FORWARD.

The recent Superintendents' Convention was an important event in the school history of the state. The personnel of the convention was encouraging. The convention was larger than any former one. It took action upon several important questions, and in every case this action seemed to us wise and progressive. The common schools of the state are efficient in proportion as the county superintendent is competent and faithful. There is a marked difference between the schools of that county which has enjoyed the continued service of a capable and conscientious superintendent, and of another that has been cursed by an official who is a mere time-server, or who administers his office for purposes other than the best interests of the schools.

The state is to be congratulated for having so many earnest and capable men in charge of her common schools. The time is not far distant, we believe, when township trustees in every county will ask first what a candidate for the office of superintendent *can do for the schools*, and will pay but little regard to the ticket he votes on election day.

The action of greatest moment by the convention was that by which a scheme for grading certificates, under the new law, was adopted. For the first time in the history of schools in this state there has been given an emphatic recognition of teaching as a profession. From this time scholarship merely will cease to be a passport to the highest grade of license known to the law. Knowledge of the theory of teaching and success in the art are conditions precedent to securing this license. It was resolved that applicants for a three years' license should give evidence of a degree of general scholarship heretofore required for the two years' license, and should *in addition* possess eminent attainments in both the Science and the Art of Teaching. It is believed that this action will teach young persons who are ambitious to become teachers, that they have something more to learn than the branches to be taught in the schools, and it is gratifying to know that the county superintendents have determined to throw the enormous weight of their influence in this direction.

The State Normal School has for a few years past been placing special stress upon the "theory and art" part of its instruction, and it is to be hoped that all the other normal schools of the state will

join with it and the superintendents in this work, and strengthen the "professional" part of their courses of study for teachers, and thus all strive to make teaching a *profession* in reality as well as in name.

HOW TO CONDUCT TEACHERS' INSTITUTES.

How to conduct institutes in the way most profitable to teachers is a problem not easily solved. As the result of four years' experience and many years' observation, the following suggestions are ventured:

1. The superintendent has sole control of the institute by virtue of law, and unless there is some special reason to the contrary should hold the reins in his own hands. The custom that prevails in some counties of entrusting the management and programme to a committee generally results in loss of time and loss in efficiency. Motions for committees, for recesses, for adjournment, etc., usually take unnecessary time.
2. The superintendent, in consultation with a few of his best teachers, weeks prior to the opening of the institute, should select and notify those who are to take part in the work of the institute. It has heretofore been customary in many counties to defer the making out of a programme and assignment of work, until after the institute is in session, and then it is done "day by day" by a committee. This is unfair to the instructors and unjust to the teachers, who deserve something better than the impromptu and immature thoughts that must be the result of such planning.
3. Teachers should observe the same order that would be expected in a well governed school. The regularity of attendance, the promptness of convening morning and afternoon, the promptness in coming to order after recess, the order observed during the work, all depend upon the superintendent quite as much as the good order of a school depends upon the teacher. The writer has visited institutes in which the attendance, promptness, and order were equal to that of the best schools; and then he has visited others over which the superintendent seemed to exercise no control. Teachers would straggle in at their leisure and leave when they pleased—not unfrequently in the midst of an exercise. It is not uncommon to see a dozen or more teachers leave at recess for the remainder of the half-day—simply to loaf or to visit. Such things ought not so to be.
4. Superintendents should secure the best possible instructors. If possible at least one person from abroad should be employed. Teachers living in the same county meet each other from year to year, not only in the county institute, but in the county associations and township institutes, and thus become familiar with each

other's work, and in a degree lose interest in it. A stranger, though no better instructor than a "home worker," will as a rule be listened to with more interest, and consequently with more profit, simply because he is strange, and because his manners and methods and thoughts are *new*. This is not a question of *ability*, on the part of instructors, so much as it is a question of interest and profit to the teachers.

5. The superintendent should arrange, as far as possible, to have the instruction *practical*.

QUESTION—*What is Practical Instruction?* Does it consist in lectures in which the teachers are simply listeners; or does it consist in class work in which each teacher is required to take a part?

Ans. Yes, and no. The *form* of the work has nothing to do with it. The common notion that only class work is practical is false. Any work is practical that gives to teachers new and helpful ideas and thoughts, and these helpful suggestions may come in the form of a lecture or in the form of a lesson. The most worthless institute ever held in this state, was one in which every exercise was a "class drill," conducted by a teacher "just as he conducted a class in his school." Class drills are excellent things provided they develop new ideas and fresh thoughts, otherwise they are dead forms. It is a waste of time for me to listen to a lecture in which there is nothing new. It is equally a waste of time to listen to a recitation conducted "just as I do," or perhaps not so well. What teachers need is something to think about—something upon which to grow—and this is *practical*, whether it comes in the form of a lecture or of a drill.

6. Teachers in order to get most good out of an institute should use their note-books freely. Take notes, *take notes*, TAKE NOTES.

BOOK AGENTS.

There are Book Agents and Book Agents, but the class I have in mind are such as represent the publishers of text-books. These are with few exceptions well educated men, who have been successful teachers. As a rule they are gentlemanly and courteous, and conduct their business in an unexceptionable manner. They all represent "the best books published," and are able to prove it to you if you can but spare them "about fifteen minutes."

Now and then a person is found who thinks that "the schools of thirty years ago were better than those of to-day," and who thinks that there has been no improvement made upon the text-books of "ye olden times," and such a person is opposed to all changes in books, and is in favor of abolishing the whole fraternity of agents. This of course is an "old fogy" view and not the common one.

The *rational view* is that Book agents are benefactors to the cause of education. (1) They are the best company that teachers, superintendents, trustees, and editors are blessed with, and are the unfailing source of free cigars. (2) They keep all these persons posted as to the latest and best things in the way of improvements in textbooks. The dissemination of these new ideas and thoughts is of great value to teachers—of much greater value than most persons think. An agent can not point out the defects of his neighbor's book and the merits of his own without giving information and arousing thoughts that will do good. (3) These agents have done a vast deal of good institute work, and are still doing some of it. The necessity for it is not now nearly so great as it was a few years ago when good institute workers were scarce.

The work of the Book-agent is entirely legitimate and as honorable as any other business, when conducted in an honorable way.

Occasionally, as in all other occupations, a "black sheep" is found, who, by "tricks that are (not always) vain," and by the persistent use of his "little auger," brings discredit upon the whole brotherhood. But this is the rare exception, and it is a pity that a large body of well educated, honorable men should be made to suffer for the "crookedness" of the few.

A NEW FORM OF COMPULSORY EDUCATION.

A little more than a year ago The Willimantic Linen Co. of Connecticut gave notice to its employees that after one year from date no one would be retained in the employ of the company who could not read and write.

•Night schools were established and a new impetus was given to the illiterate class to acquire at least the rudiments of an education. Not only those who wished to hold their places, but those who desired to secure places, entered these night schools and worked with a purpose. At the end of the year the few who disregarded the warning were discharged.

In a few of the manufacturing states proprietors are not allowed to employ children who have not been in school at least three months in the preceding twelve months, but the law is not always enforced. This Linen Co. hit upon a better plan. It furnishes a stimulus not only for children but for their parents.

Is there not a good suggestion in this, and may there not be much done along this line to diminish the number of illiterates?

Intemperance can often be reached in the same way.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR JUNE.

READING.—1. How should the words *a* and *the* be pronounced in reading? 2 pts, 5 each.

2. What is meant by the phonic method of teaching reading? The word method? 2 pts, 5 each.

3. What is the object of emphasis? 10

4. What objects are to aimed at in teaching reading? 10

5. Write a sentence which requires the rising inflection; also a sentence requiring the falling inflection. 2 pts, 5 each.

6. Read a paragraph of prose and a stanza of poetry selected by the superintendent. 2 pts, 25 each.

ARITHMETIC.—1. In division of fractions, why does inverting the divisor, and multiplying the resulting fractions together produce the correct answer? 10

2. A horse runs $\frac{1}{4}$ of a mile in $\frac{1}{4}$ of 3 minutes; how long will it take him to run $\frac{1}{4}$ of 25 miles? 5, 5.

3. A man exchanges 6 books at $33\frac{1}{2}$ cents each; 16 at $12\frac{1}{2}$ cents each; and 32 at $6\frac{1}{2}$ cents each, for books at $16\frac{1}{2}$ cents each; how many does he receive? Solve by aliquot parts. 5, 5.

4. How many loads of earth, one cubic meter each, will be taken from a ditch 8 dekameters long, 4.5 meters wide, and 24 decimeters deep? 5, 5.

5. When at a certain place it is Monday, 10:45 P. M., at another it is Tuesday, 1:25 A. M., how many degrees, and in what direction is the second place from the first? 5, 5.

6. A pendulum vibrates 60 times in a minute; how many times did it vibrate in February, 1880? 5, 5.

7. 45% of a gallon is what % of a pint? 5, 5.

8. What % must be assessed upon \$1,500,000, to produce \$29 400, after paying 2% for collection? 5, 5.

9. Find the square root of $52\frac{1}{4}$. 5, 5.

10. If 6 men dig a ditch 20 rods long, 6 feet deep, 4 feet wide, in 16 days, working 9 hours a day, how many days will it take 24 men to dig one 200 rods long, 8 feet deep, 6 feet wide, working 8 hours a day? 5, 5.

ORTHOGRAPHY.—1. What is the distinction between a vowel and a consonant? A vocal and an aspirate? 2 pts, 5 each.

2. What is meant by a silent letter? What letters are never silent? 2 pts, 5 each.

3. What is phonetic spelling? Orthographic spelling? 2 pts, 5 each.

4. Syllabify and accent the following words: *Industry, inquiry, idea, orthæpy, European.* 5 pts, 2 each.

5. Write phonically, indicating the vowel sounds by the proper diacritical marks: *Leisure, champaign, machine, prophet, righteous.* 5 pts, 2 each.

6. Spell ten words dictated by the superintendent. 10 pts, 5 ea.

THEORY OF TEACHING.—1. What is the analytic method of teaching?

2. Why is a loss of temper by the teacher always attended by a loss of governing power?

3. State the objections to prizes as a motive in teaching.

4. What is the imagination?

5. Name the physical conditions or surroundings which will aid in maintaining order in the school.

NOTE.—The superintendent is advised to give credit to the applicant for the intelligence manifested by his answers rather than for their conformity with his own notions of their correctness.

GRAMMAR.—1. Define a sentence. Into what classes are sentences divided according to use? Define each. 3, 3, 4.

2. Define a common noun; a proper noun. State when a common noun becomes proper, and when a proper noun becomes common. 2, 2, 3, 3.

3. Write a sentence containing a proper noun made common by its use. 10

4. Define a pronoun. Name the different kinds of pronouns. Define each. 3, 3, 4.

5. Write a sentence containing a restrictive clause; a sentence containing an explanatory clause. 5, 5.

6. Write a table showing the declension of the personal pronouns.

7. Give a conjugation of the verb *call* in the future tense, indicative mood, active voice, showing the distinction in the use of *shall* and *will*.

8. Correct the following sentence, and give a reason for the correction: Each strives to get ahead of the other in their own little craft.

9. Analyze the following sentence:

"The name that dwells on every tongue
No minstrel needs."

10. Punctuate the following sentence: I pity the man who can travel from Dan to Beersheba and say 'tis all barren and so it is and so is all the world to him who will not cultivate the fruit it offers.

GEOGRAPHY.—1. What part of the earth's surface is land? Define continents. 5, 5.

2. Describe the general circulation of the water in the air and on the land. 10

3. What animals characterize each zone? 10
4. Name the principal mountain range and river in each of the Middle States. 5, 5.
5. What is the general surface of the Central States? Their commercial advantages? 5, 5.
6. Describe the natural wealth of Brazil. 10
7. Where is the Dominion of Canada? To what country do Greenland and Iceland belong? 10
8. Name and locate the five largest cities of Russia. 5, 2 each.
9. Locate Fort Wayne, Logansport, Terre Haute, Jeffersonville, Michigan City. 5, 2 each.
10. What two forms have mountains? What is a mountain system? 5, 5.

PENMANSHIP.—1. Describe the whole-arm movement.

2. What is meant by *form*? In what manner does a careful study of form aid in making a good penman?

3. Define horizontal, vertical, and oblique lines. What is meant by a slant of 52° ? of 30° ?

4. How should *p* and *f* be shaded? Where should we begin in forming the small letters? Where end? Where should the shade occur in the letter *b*?

5. Name the principles which occur in the following letters: *A*, *m*, *x*, *h*, *y*.

Specimen of penmanship—

"All are architects of Fate,
Working in the walls of time,
Some with massive deeds and great,
Some with ornaments of rhyme."

NOTE.—Require the applicant to copy the specimen in ink. The superintendent should mark it from one to fifty, according to merit.

U. S. HISTORY.—1. What is the distinction between Biography and History? 10

2. Describe the assassination of President Lincoln, 1865. 10

3. Name five prominent American literary writers now living. 5 pts, 2 each.

4. Name the Vice-Presidents of the United States that have become Presidents. 10

5. (a) Who invented the cotton gin? (b) What was the effect of the invention? a 3, b 7.

6. (a) Why, and (b) by whom were the Quakers persecuted? a 6, b 4.

7. (a) When, (b) where, and (c) by whom was Virginia settled? a 4, b 4, c 2.

8. (a) What was the Ordinance of 1787? (b) What did it effect? a 4, b 6.

9. Write the early history of Indiana. 10
 10. (a) What is the Monroe Doctrine? (b) How did it originate? a 5, b 5.

NOTE.—No answer to exceed ten lines.

PHYSIOLOGY.—1. Name the principal excretory organs.

2. What are the lacteals? What is their function?
3. What is the function of the blood?
4. Trace the air passages from the mouth to the air cells.
5. What is the source of bodily heat?
6. By what routes does the food leave the stomach?
7. How many kinds of joints are found in the human body?
8. What is color blindness?
9. How do gray and white matter differ?
10. What effects follow injuries of the medulla oblongata?

ANSWERS TO STATE BOARD QUESTIONS FOR JULY,

ARITHMETIC.—1. In multiplication the unit of the product must be of the same kind as that of the multiplicand; therefore quarts multiplied by any number will result in quarts.

2. .00000375

300.00000075

3. a. $(25 - 16)^{\frac{1}{2}} = 3.$

b. $(12\frac{3}{4} - 8\frac{1}{2} \times 8) = 34.$

c. $34 \times 3 = 102.$

4. a. As multiplying both terms of a fraction by the same number does not change the relation between the value of the parts into which the unit is divided, and the number of the parts taken, the value of the fraction is not changed. b. So also dividing both terms of a fraction by the same number leaves the value of the fraction unchanged. c. As this is true in both cases, whatever number the multiplier or divisor may be, it follows that the proposition must be true.

5. $\frac{12 \times 26 \times 65}{6 \times 6 \times 13 \times 2} = 25.$

By the first principle in the preceding problem, dividing both terms of a fraction by the same number leaves its value unchanged, therefore the two processes of cancellation marked respectively 1 and 2, being in accordance with this principle the resulting quotient must agree in value with the original fraction.

6. a. Each vessel sailed 20 minutes in time from its original port, and, as they sailed towards each other, the ports were apart 40 minutes in time. b. As 4 minutes in time equal one degree in longitude, the distance between the ports must be as many degrees apart as 4 minutes are contained in 40 minutes, or 10 degrees.

7. As $\frac{16}{100}$ of the par value of the stock is to equal $\frac{16}{100}$ of its cost, the cost must equal $\frac{1}{3}$ of its par value, or 66 $\frac{2}{3}$ %.

8. a. $3\frac{1}{3} = \frac{10}{3}$.

b. $\sqrt{\frac{10}{3}} = \frac{1}{3} = 1\frac{1}{3}$.

9. $\frac{1}{3} : \frac{9}{3} \left. \vphantom{\frac{1}{3} : \frac{9}{3}} \right\} :: 4 : 160$.

10. a. A cube of 1 inch edge contains 1 cubic inch.

b. A cube of 2 inches edge contains 8 cubic inches.

c. A 1 cubic inch weighs 1 oz.; 8 cubic inches will weigh 8 oz.

READING.—1. The thought must be fully comprehended by the mind, the sentiment contained in the selection must be felt, and the words fully mastered.

2. Exercises for drill in articulation may include practice in the careful pronunciation of unaccented syllables, in avoiding the omission of unaccented vowels, in distinct articulation of final consonants, and in avoiding the omission or the improper combination of consonant sounds in certain words.

3. The natural key or pitch in reading is that pitch of the voice used by the reader in ordinary conversation. Variations above or below are called *high* or *low* pitch, as the case may be. It is essential that pupils acquire the habit of using this conversational tone in reading in order to avoid the association of improper quality with the thought, to be without embarrassment as to mannerism, so that the attention may be given to proper utterance, and in order to prevent the stilted or affected style thought to be necessary by so many young people.

4. Two things are necessary to avoid monotonous reading—life in the teacher and interest in the pupil. The first may be secured by careful study of the lesson and its objects beforehand with the view of being fully prepared to accomplish the objects through the pupil himself; the second, by awakening the pupil's interest, emotion, and appreciation, by skillful questions, suggestions and illustrations, (a) of the thought, (b) of the mode of utterance.

"I wish I were a reindeer,
To gallop o'er the snow,
Over fleecy Lapland drear,
So merrily I'd go."

1. Where is Lapland, and why is it called "fleecy"?
2. Who live there, and how do they live?
3. Why is Lapland called "drear"? (Explain "*drear*" before asking this question).
4. Did you ever see a picture of a reindeer? How does it appear? etc. (Get as full description as you can from the pupils, then correct any errors and add other facts).

5. Of what use is the reindeer? How do they "gallop o'er the snow"? etc. (Get the scene fully pictured in the pupil's mind, then let him read the stanza).

PHYSIOLOGY.—1. The bones of the forearm are two, the radius and the ulna. The radius is attached lightly on the outer side of the elbow and to the wrist just back of the thumb. The ulna is attached firmly by a hinge joint at the elbow and lightly to the wrist just back of the small finger.

2. The bones are nourished by the blood which circulates in the Haversian canals and in the canaliculi, and by the living cell-centers in the lacunæ.

3. Nutrition is a general term for the processes by which the nourishment of the body is accomplished.

4. Assimilation is that process by which outside materials are worked up into the living tissues of the body.

5. The principal centers of nervous action are the brain, the spinal cord, and the ganglia of the "sympathetic nervous system."

6. The heart receives nervous impulse and control from these sources: the regular internal cardiac ganglia, the pneumogastric nerve, and the sympathetic cardiac ganglia. The first keeps up the automatic heat of the heart, the other two regulate its rate and force.

7. Voluntary muscles are those under the direct control of the will, as contrasted with the involuntary and the semi-voluntary (muscles of eyelid).

8. Reflex actions are due to the transmission of impressions along the sensory nerve fibres to the spinal cord, which, being thus stimulated, transmits an impulse along the motor nerve to the part affected or disturbed. Reflex actions are spasmodic and are unknown to the consciousness or the will. They may occur during sleep, after an injury to the spinal cord above the point of junction of a nerve fiber, when the brain is deeply absorbed, etc.

9. To receive blood either from the veins or from the lungs, and to force it into the ventricles.

10. In the brain, the gray matter forms a thin layer $\frac{1}{4}$ to $\frac{1}{2}$ of an inch thick over the white matter. There is more of the gray than of the white, however. In the spinal cord, the gray matter is within, somewhat in the form of the letter H, and is surrounded by the white matter.

[Answers to other questions are taking a vacation this month.]

Hanover College graduated one lady this year. Wabash and Notre Dame are now the only colleges in Indiana that do not admit women.

GEMS OF THOUGHT.

My fairest child, I have no song to give you ;
No lark could pipe to skies so dull and gray ;
Yet ere we part, one lesson I can leave you
For every day.
Be good, sweet maid, and let who will be clever.
Do noble things, not dream them, all day long ;
And so make life, death, and that vast forever,
One grand sweet song. [Charles Kingsley.

WONDERFUL WORDS.

Keep a guard on your words, my darlings,
For words are wonderful things ;
They are sweet like the bees' fresh honey,
Like the bees they have terrible stings.
They can bless like the cheering sunshine,
And brighten a lonely life ;
They can cut in the strife of anger
Like an open, two-edged knife.
Let them pass through your lips unchallenged
If their errand is true and kind ;
If they come to support the weary,
To comfort and help the blind.
If a bitter, revengeful spirit
Prompt the words, let them be unsaid ;
They may flash through the brain like lightning,
Or fall on the heart like lead.
Keep them back if they're cold and cruel,
Under bar, and lock, and seal ;
The wounds they make, my darlings,
Are always slow to heal.
May peace guard your lives, and ever,
From this time of your early youth,
May the words that you daily utter,
Be the beautiful words of truth. [N. Y. School Journal.

The baccalaureate address delivered at Earlham College commencement was by Edward Taylor, a former student of the college, and at present superintendent of the schools of Vincennes. It contains more *excellent* and *inspiring* thoughts than the writer has read or listened to for many years on similar occasions, and since it has been printed in pamphlet form, it can be carefully preserved, which treatment it most certainly merits.

MISCELLANY.

ISLAND PARK ASSEMBLY.

This organization after five years successful operation has become familiar to nearly every reader of the Journal. All will be glad to know that the last session was the most successful yet held. It opened July 10th and closed July 23d. The Secular Normal, under the immediate instruction of W. H. Payne, of Michigan University, and J. Fraise Richard, of Mansfield, O., was in session four weeks, closing with the Assembly. This department was not as large as the character of the instruction warranted. The Sabbath School Normal was much more largely attended, also the Musical Departments. The Departments of Fine Art, Language, and Microscopy, were fairly attended. The Kindergarten, conducted by Miss Cunningham, of Chicago, was an eminent success. The daily lectures, sermons, and concerts were of a high order. A daily paper, called *The Assembly*, edited by R. H. Rerick and A. W. Clancy, giving programmes, announcements, extracts of addresses, news, etc., etc., was a pleasant feature. Supt. Gillett would make a good brigadier general.

The lake and island and surroundings are delightful. The idea of combining intellectual and moral instruction with physical and mental recreation is excellent. When one is tired rowing and fishing he can attend a concert or listen to a lecture, and when he has all the instruction he wishes to digest he can play croquet.

The Assembly will doubtless grow from year to year, as it deserves.

THE NORTHERN INDIANA TEACHERS' ASSOCIATION.

The teachers of Northern Indiana organized the long-talked-of association, at Rome City, Monday evening, July 9, 1883. The attendance was quite small, but the interest was good, and a permanent organization was effected. Rev. A. H. Gillett, Supt. of the Assembly Association, made a cordial welcoming address, to which D. W. Thomas, of Wabash, made an appropriate response. The following officers were elected: J. K. Walts, Logansport, president; D. D. Luke, secretary; and John P. Mather, Warsaw, treasurer.

J. Fraise Richard gave the address of the evening, on "The Bible as a Text-book. At the conclusion it was remarked that Rev. would be quite as appropriate as Prof. before Mr. Richard's name.

"Our License System" was the title of a paper read by William Ireland, of Burnettsville. He criticised very severely many things connected with the present system. He charged that it encouraged

study for the sake of getting a license rather than for the sake of mastering subjects. He argued that teachers should be given more time in examination; that a trial license should be given without examination; that examinations should be less frequent; that only professional teachers should be eligible to the county superintendency, and that teachers should be pensioned.

The discussion of the paper was opened by Geo. P. Brown, of the State Normal, and he was followed by A. W. Clancy, W. A. Bell, Sheridan Cox, D. D. Luke, and others.

Fannie Knowlton, of the Logansport high school, read a paper on "Manners," in which she spoke of the great importance of the subject, and the necessity for teaching it in the schools. The paper was full of valuable suggestions and elicited warm commendations.

The discussion was opened by W. A. Bell, who was followed by W. H. Payne, of Mich., George P. Brown, T. J. Sanders, of Butler, and others.

James Baldwin, Supt. of Huntington, now of Rushville, read a valuable paper on the "Evolution of the Public Schools." [This paper will be printed in the Journal.] The discussion was opened by John P. Mather.

"History in the Public Schools" was the subject presented by C. T. Lane, principal of the Fort Wayne high school. The paper was an elaborate discussion of the comparative value of history and natural science, and contained valuable suggestions as to what to teach in history and how to teach it.

The discussion was opened by A. D. Mohler, of Lima, who was followed by D. D. Luke, and others.

"English Instruction in Public Schools" was the subject of a paper by E. E. Smith, Professor of English Literature in Purdue University. The paper contained many valuable suggestions and much practical advice. [The paper, together with a series of articles on "Teaching English," will be printed in this Journal.]

The discussion was opened by D. D. Luke, who was followed by others. The discussion was *lively*.

The association adopted the following

CONSTITUTION.

1. The association shall be known as "The Northern Indiana Teachers' Association."
2. The object of the association shall be to advance the interests of education generally, and especially to stimulate the teachers of Northern Indiana to more advanced thought and activity.
3. The officers of the association shall be a president, two vice-presidents, a secretary, a business and an executive committee of five members, to be elected annually.

4. The duties of the officers of this association shall be such as usually devolve upon the respective officers of similar organizations.

5. The association shall hold its meetings annually, at such time and place as may be determined by the association.

6. Any person of good character may become a member by the payment of 50 cents, and such annual fees as may be required hereafter by the association.

7. This constitution may be altered or amended at any regular meeting of the association.

The committee on officers for next year reported as follows:

President, J. K. Walts, Logansport; 1st Vice-President, J. A. Kibbe, Kendallville; 2d Vice-President, S. Cox, Kokomo; Secretary, D. D. Luke, Ligonier; Treasurer, W. Irelan; Executive Committee, D. W. Thomas, chairman, T. B. Swartz, J. P. Mather, C. T. Lane, E. E. Smith. Adopted.

The association voted thanks to the managers of the Assembly for courtesies shown them.

On motion, it was agreed that the next meeting be held at Rome City, the time to be fixed by the executive committee.

MUNCIE.—The Muncie high school is perhaps the largest in the state in proportion to the population of the place in which it is located. The average school attendance for the past year was 867. The enrollment of the high school was 160, and the average attendance was 123, only three of whom entered the school under 14 years of age. Mrs. McRae knows how to make a high school that will draw and hold. The entire colored school population is 30, three of whom graduated from the high school.

THE NEW ILLINOIS SCHOOL LAW provides that each teacher upon being examined shall pay a fee of \$1. This money constitutes what is known as an institute fund. Ohio has a similar law. With from \$100 to \$400 to expend an institute can be extended as to time, and made first-class in every particular.

D. E. Hunter delivered an address before the graduating class of the Washington high school, entitled the O. & M.—“The Big Four.” This has been published in pamphlet form for the graduating class, and furnishes entertaining reading matter.

SAGE COLLEGE was built, furnished, and endowed by the Hon. Henry W. Sage, at a cost of over \$250,000, and by him given to Cornell University as a place of residence for lady students.

The series of articles on Reading, by Joseph Carhart, of the State Normal School, will begin in September Journal.

COUNTY INSTITUTES.

- Aug. 6—Jackson county, Brownstown. Jas. B. Hamilton, Supt.
" 13—Clark county, Charlestown. John P. Carr, Supt.
" Decatur county, Greensburg. John H. Bobbit.
" Fayette county, Connersville. J. S. Gamble. (2 weeks.)
" Floyd county, New Albany. C. R. McBride.
" Huntington county, Huntington. Edwd. A. McNally.
" Parke county, Rockville. Wm. H. Elson.
" Putnam county, Greencastle. Leonidas E. Smedley.
" Switzerland county, Vevay. James R. Hart.
" Wabash county, Wabash. Harvey A. Hutchins.
" Wayne county, Centreville. John C. Macpherson.
" 20—Blackford county, Hartford City. Lewis Willman.
" Cass county, Logansport. D. D. Fickle.
" Clinton county, Frankfort. Wm. H. Mushlitz.
" Daviess county, Washington. Samuel B. Boyd.
" Dearborn county, Aurora. Harvey B. Hill.
" Delaware county, Muncie. John O. Lewellen.
" Fulton county, Rochester. Wm. J. Williams.
" Grant county, Marion. George A. Osborn.
" Greene county, Bloomfield. Samuel W. Axtell.
" Hamilton county, Noblesville. A. H. Morris.
" Hancock county, Greenfield. R. A. Smith.
" Jasper county, Rensselaer. D. M. Nelson. (2 weeks.)
" Jay county, Portland. Wm. J. Houck.
" Jefferson county, Madison. O. E. Arbuckle.
" Jennings county, Vernon. Samuel Conboy.
" Johnson county, Franklin. M. F. Rickoff.
" Knox county, Vincennes. W. H. Pemington.
" La Porte county, La Porte. Warren A. Hosmer.
" Montgomery county, Crawfordsville. J. M. Cantley.
" Morgan county, Martinsville. E. W. Paxson.
" Owen county, Spencer. Oliver P. McAuley.
" Posey county, Mt. Vernon. James Kilroy.
" Randolph county, Winchester. H. W. Bowers.
" Spencer county, Rockport. J. W. Nourse.
" St. Joseph county, Mishawaka. Calvin Moon.
" Sullivan county, Sullivan. James A. Marlow.
" Tippecanoe county, La Fayette. Wm. H. Caulkins.
" Warren county, Williamsport. F. M. Sutton.
" Washington county, Salem. W. C. Snyder.
" Pike county, Winslow. John Whitman.
" Porter county, Vaiparaiso. Homer Porter.

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- Aug. 27—Adams county, Decatur. J. F. Snow.
 " Benton county, Fowler. B. F. Johnson.
 " Boone county, Lebanon. H. M. La Follette.
 " Carroll county, Delphi. B. W. Everman.
 " Crawford county, Marengo. Edward J. Bye.
 " Franklin county, Brookville. Michael A. Mess.
 " Harrison county, Corydon. Daniel F. Lemmon.
 " Hendricks county, Danville. A. E. Rogers.
 " Henry county, New Castle. W. R. Wilson.
 " Howard county, Kokomo. John W. Barnes.
 " La Grange county, La Grange. Enoch G. Machan.
 " Madison county, Anderson. W. M. Croan.
 " Marion county, Indianapolis. Lea P. Harlan.
 " Marshall county, Plymouth. Thomas Shakes.
 " Martin county, Shoals. Kinsey F. Cornwell.
 " Monroe county, Bloomington. John M. McGee.
 " Ohio county, Rising Sun. R. E. Woods.
 " Perry county, Cannelton. Israel L. Whitehead.
 " Ripley county, Versailles. George W. Young.
 " Rush county, Rushville. J. L. Shauck.
 " Scott county, Scottsville. James H. McCullough.
 " Shelby county, Shelbyville. Douglass Dobbins.
 " Tipton county, Tipton. Frank B. Crockett.
 " Union county, Liberty. C. W. Osborn.
 " Vanderburgh county, Evansville. E. D. McAvoy.
 " Vigo county, Terre Haute. John S. Vancleave.
 " Warrick county, Booneville. Wm. W. Fuller.
 " Wells county, Bluffton. W. H. Ernst.
 " White county, Monticello. William Guthrie.
 Sept. 3—Elkhart county, Elkhart. Piebe Swart.
 " Newton county, Kentland. W. H. Hershman.
 " Kosciusko county, Warsaw. Samuel D. Anglin.
 " Orange county, Paoli. George W. Faucett.
 " 10—Fountain county, Veedersburg. James Bingham.
 " Pulaski county, Winamac. W. E. Netherton.
 " 24—Starke county, Knox. Henry C. Rogers.
 Oct. 15—Noble county, Kendallville. W. P. Denney.
 Dec. 24—Lake county, Crown Point. Frank E. Cooper.
 " Whitley county, Columbia City. Jos. W. Adair.

G. W. Bell and Ella Tilford are conducting a very successful normal term at Martinsville.

Commencement at Southern Indiana Normal College occurred Thursday, July 26th.

THE NATIONAL EDUCATIONAL ASSOCIATION, which convened at Saratoga, N. Y., the second week in July, was largely attended and full of interest. Many of the leading educational lights of the country were present, *thirty-one* states being represented.

A new department, that of Art Education, was added to the association, and Prof. L. S. Thompson, of Purdue, was made President. Thos. W. Bicknell, editor of the *Journal of Education*, was made President of the Main Association. E. C. Hewett, of Ill., was made President of the Normal Department. J. L. Pickard, of Iowa, was made President of the Department of Higher Education. C. M. Woodward, of St. Louis, is President of the Industrial Section. F. Louis Souldan, of St. Louis, is President of the Primary Department. Hon. E. E. White, of Purdue, was elected President of the National Council of Education.

Indiana was, with the exception of Ohio, the best represented state west of the Alleghany mountains. There were present: President Moss, of the State University; Pres. E. E. White, Prof. Thompson, of Purdue; James H. Smart, Pres. elect of Purdue; H. S. Tarbell, J. J. Mills, Miss Selleck, and Mrs. Wilson, of Indianapolis.

Joseph Moore has resigned the presidency of Earlham College on account of failing health. Owing to President Moore's long and efficient service of the college, the trustees have accepted his resignation as President, but have elected him Professor of Natural Science, and given him leave of absence for one year on half pay. As he is in the mountains of East Tennessee it is not known whether or not he accepts the latter proposition. Not only Earlham College but the State are interested in his speedy recovery.

Prof. Wm. P. Pinkham has been elected acting-president for the coming year.

CHEAP MONEY ORDERS.—We wish to call the attention of our readers to the great reduction in cost of sending money by the Post-office department. Since July 1st there can be obtained at any money order office postal notes in sums of \$5 and under by paying a fee of three cents. We regret that these postal orders are issuable only from money order offices, yet it is an advance in the right direction, and we hope our readers will make use of this new and cheap means of sending money for subscription.

ANSWER TO QUERY.—In answer to query "What is the origin of the sign \$?" C. W. Hollopeter, of Leo, says: "It was formerly used as two distinct letters, U. S., meaning 'belonging to the United States.' It finally became confused with u. s., then the S written over the U; and \$, making the two straight marks first and then S afterward, and used as the sign of U. S. money."

PERSONAL.

Clara J. Armstrong, formerly principal of the Indianapolis Training School, who has been for several years past principal of a school in the Argentine Republic, recently returned to Indianapolis on a short visit, took back to South America with her five of the city teachers, viz: Isabel King, Rachel King, Ruamy Wales, Rosa Dark, Sarah Harrison, and also Edelle Ellis, of Franklin. These ladies are all good teachers, some of them superior. They go for one year with the privilege of five years, on salaries varying from \$1000 to \$2000. Their salaries began the day they sailed from New York. Their first six months will be occupied chiefly in studying the Spanish language—the language of the Republic.

H. B. Jacobs, for many years superintendent of the New Albany schools, has been appointed superintendent of the Institution for the Blind at Indianapolis. He is an active, energetic, conscientious educational man, and is always a christian gentleman. He will make an excellent superintendent if left in charge long enough to learn the specialties that attach to such an institution. Mr. Jacobs will prove a success if given a fair chance, and is not trammelled by the political "obligations" of others.

James MacAllister, who recently resigned the superintendency of the Milwaukee schools to take the supervision of the Philadelphia schools, has been cordially received by the "City of Brotherly Love," and has made a good impression. He has made several public addresses, at which he is a master, and has spent his time so far in learning just "how the land lies," but as yet has attempted no innovations upon the old order of things.

Rev. D. A. Long, A. M., President of Graham Normal College, North Carolina, has been elected President of Antioch College, at Yellow Springs, Ohio. Mr. Long is a graduate of the University of North Carolina, with a post-graduate course at Yale. He is an eloquent speaker and a ripe scholar. Antioch deserves a superior president, and it is to be hoped that Mr. Long will prove such.

Hamilton S. McRae, for so many years superintendent of the Muncie schools, has been elected superintendent of the Marion schools, and Mrs. McRae has been elected principal of the high school. If the people of Marion want first-class schools, all they have to do is to give Mr. and Mrs. McRae a fair chance, and there will be no trouble about it.

T. W. Fields, who has been a leading teacher for years, and who writes extensively for educational papers, is now editor of the *Portians' Weekly Commercial*.

W. H. Nesbitt takes the school at Farmers' Institute.

A. C. Crouch will remain in Petersburg another year.

D. D. Luke is still at the head of the Ligonier schools.

James Du Shane will remain at South Bend next year.

J. W. Love is to have charge of the Annapolis schools.

J. A. Kibbe is re-elected Supt. of the Kendallville schools.

W. E. White is re-elected principal of the Albion schools.

S. A. Cragun leaves Zionsville to take the Lebanon high school.

W. B. Dimon will remain in charge of the Crown Point schools.

W. B. Van Gorder is re-elected principal of the Rome City schools.

D. W. Dennis will continue in charge of the Bloomingdale Academy.

W. M. Sinclair, last year of Kentland, will teach this year at Monticello.

C. E. Clark, of Huntingburg, will teach there another school session.

Chas. Hewett has been re-elected superintendent of Knightstown schools.

W. F. Yocum will remain at the head of Fort Wayne College another year.

R. A. Ogg has been re-elected principal of the New Albany high school.

George M. Rice is the new superintendent of the Montezuma schools.

Nimrod F. Jenkins takes charge of the Kentland schools the coming year.

J. L. Houchen will continue in charge of the Fortville schools next year.

A. N. Higgins will be principal of the Veedersburg schools the coming year.

Prof. Maxwell, of Purdue, for the present has charge of a church at Williamsport.

Prof. Herron, of Purdue, will hereafter reside on his farm near Montezuma, Iowa.

W. T. Lucas has engaged for his third year as principal of the Patoka schools.

C. S. Carter will serve as assistant in the high school at Crawfordsville the coming year.

R. N. John, formerly of Dublin, has been elected principal of the Shelbyville high school.

J. T. Merrill has been elected superintendent of the La Fayette schools for the 16th time.

Vincennes high school added seven to her list of graduates, making the whole number 124.

Chas. F. Coffin has been unanimously re-elected superintendent of the New Albany schools.

E. P. Hartley, superintendent of Fostoria, O., is to take charge of the schools of Lincoln, Neb.

J. L. Rippetoe has been re-elected superintendent of the Connersville schools for a *fifteenth* year.

G. W. Bell will take charge of the Monrovia schools again. This will be his fifth year in this town.

P. H. Kirsch, a graduate of the State Normal, has been elected principal of the schools at Rensselaer.

Stella D. Spencer, Ph. B., of Cornell, will teach in the Indianapolis Classical School for girls the coming year.

H. M. McNight resigns the superintendency of the Covington schools and goes West on a salary of \$1200.

Geo. W. Evans, A. B., of Harvard, Mass., will teach in the Indianapolis Classical School for boys next year.

James G. May is not yet four score years old, as was stated in the July Journal. His last birth-day numbered 78.

T. L. Lucas, superintendent of the Brownstown schools, has been elected superintendent of schools at Niles, Mich.

Samuel Findley, editor of the *Ohio Educational Monthly*, will hereafter devote his entire time to his editorial work.

G. F. Kenaston will have charge of the Attica schools, and J. M. McBroom will be principal of the high school next year.

Arnold Tompkins will remain as superintendent of the Franklin schools, and Mrs. Tompkins as principal of the high school.

F. M. Sutton is Supt. of Warren county, as decided by the lower courts. Whether an appeal will be taken is not yet known.

E. E. Smith will visit the normals at Albion, Attica, Logansport, and the institutes in Wabash, Clinton, and Boone counties.

Maggie Laird will have charge of the primary department of the Girls' Classical School at Indianapolis for session of '83 and '84.

Temple H. Dunn was re-elected superintendent of Crawfordsville schools at a salary of \$1500, an increase over that paid last year.

Miss Lillian Thompson, of Franklin, and a graduate of Franklin College, is to be the principal of the Knightstown high school next year.

C. G. White, of Decatur, has been selected to superintend the Portland schools. Mr. White holds a state certificate of the first grade.

Miss Caroline Furber, a graduate of the State Normal, is to be instructor in language and primary methods in the Richmond Normal.

C. H. Wood, formerly of Harrison county, but for the last year at Lebanon normal school, has been selected principal of the Winchester high school.

F. D. Churchill has been promoted to the superintendency of the Aurora schools, and J. A. Van Houten has been made principal of the high school.

Moses C. Stevens, A. M., a teacher of many years' experience in Ohio, has recently been elected to the chair of Mathematics in Purdue University.

E. E. Smith, B. A., B. S., for six years past Principal of Purdue University Academy, has been promoted to the chair of English Literature and History.

PORTLAND.—The Eastern Indiana Normal at Portland is now fully under way, with an attendance of about 150 students. This is certainly a good beginning.

Tippecanoe county will require the services of 208 teachers the coming year. W. H. Caulkins has entered upon his ninth year's service as county superintendent.

C. D. Bogart, for the past two years principal of the North Vernon schools, has been elected superintendent of the Chattanooga, Tenn., high school. Mr. Bogart is now in the Indian Territory.

State Supt. J. W. Holcombe took a few weeks rest from official duties, at Lake Geneva, Wis. He is now on duty again, and will visit as many of the county institutes as he is able to reach.

Jabez Montgomery, science teacher in the Indianapolis high school, has accepted a professorship in Kalamazoo College, Mich. Prof. Montgomery is an efficient teacher and a courteous gentleman.

A. J. Snook, of Princeton, was elected Supt. of the Huntington schools, and accepted; but his old board protested in such a substantial manner that he felt obliged to reconsider and remain at Princeton.

Simon P. Neidigh, superintendent of Brown county, was married July 17th, to Mrs. Mary C. Hester, an estimable lady of Nashville. Mr. and Mrs. Neidigh have the hearty congratulations and best wishes of the Journal.

John R. Weathers was recently elected superintendent of the Cannelton public schools for another year, with most of his old corps of teachers. The past year was one of the most successful in the history of the Cannelton schools.

R. G. Boone, superintendent of the Frankfort schools, has had the honor of declining, recently, a professorship in the State Normal School, and the principalship of Purdue Academy, both good positions, each paying a salary of \$1500.

W. C. Barnhart, who has been superintendent of the Columbia City schools, was recently elected superintendent of the Mt. Vernon, Ill., schools, at a salary of \$1200. In the removal of Mr. Barnhart Indiana loses a good superintendent and a courteous gentleman.

O. P. Jenkins, a Johns Hopkins University man, for several years connected with Moore's Hill College, and one of the most successful institute workers in the state, has been elected to the chair of Natural Science in the State Normal School, to fill the vacancy caused by the resignation of Eli F. Brown.

Lucy Stone Blackwell, who graduated from Oberlin College thirty years ago, was not allowed to appear on the college rostrum to read her essay—one of the Professors read it for her. At the recent Semi-Centennial anniversary of that institution she was invited to be the chief orator of the day. Progress.

Carrie C. Sharp and Mrs. D. B. Wells, two of the leading principals of the Fort Wayne schools, will open a boarding and day school at Fort Wayne, September 12, 1883. They call it "The Westminster Home School," and intend that it shall be a refined, courteous, christian home for young ladies, in which to pursue their studies.

A. H. Hastings, for two years past superintendent of the Marion schools, after 15 years experience as teacher and superintendent, has decided to quit the profession, on account of its uncertainties. He wishes to engage in a business that will not become more uncertain as he grows old, and that will enable him to settle and have a home.

W. B. Wilson, former superintendent of Owen county, and late of the Edinburg schools, but for the last two years superintendent of the Blind Asylum at Indianapolis, has for political reasons alone lost his place. It is a disgrace to our civilization that politics and political methods should be allowed to touch our schools and our benevolent institutions.

POPULAR SCIENCE.

This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

MY CABINET.

"I always keep a few things about the school-room, that we may have something to ask and answer questions about. In this case are some 50 boxes of seeds labeled with their common and botanical names; some 30 sections of trees and samples of woods to show such things as annulars, silver grain, sap and heart wood, grain and porosity. Here is a little herbarium in this drawer of 100 species of our common wild plants in fruit and flower; they are named and classified as they occur in Gray's Botany. Indiana has over 1400 flowering plants; each county has usually over 1000; these I have give pupils some idea of our flora, and the way of classifying plants. I teach the children how to collect and preserve plants and woods, as a vacation amusement; I help them in naming and classifying. Such work makes them sharp and observing; object teaching does not amount to much unless children have an interest in the objects, and there is no interest like that secured by labor and possession.

In these boxes are my zoölogical specimens—only a few of our

common mammals, birds, fishes, and reptiles, which I collected and prepared at various odd moments. I have the skin of a thrush, a wren, warbler, a sparrow, and a swallow, and an oriole, representing the most important families of perching birds; a sparrow hawk and a screech owl for birds of prey; a red head and chimney swift for the climbers; a passenger pigeon for the doves; a quail for the scratching group; a spotted sandpiper for the waders; a wood duck, etc. I have less than fifty of our three hundred native birds, but they are well selected, and I know the personal history of each.

My object is to arouse a real interest in birds, and to that end I read from Burroughs, Coues, Audabon, and Wilson; I look up the relations of birds to legend and literature as shown by the facts. The whole collection does not occupy a cubic foot of space, but I would not part with them for all the birds of Australia for school-room use for my purpose. My bird books cost me little or nothing; I get the best of them from the government, and make them up from magazine articles and the like. I have always kept a natural history scrap-book.

In that drawer are my mammals—not many, but representative ones. A little possum for the marsupials, a shrew and mole for the insect eaters, the common red and brown bat, a squirrel and a gopher, and so on. Oh yes! I skin them myself—nothing easier; I read it up in Coues' *Manual of Taxidermy*; a cut down the abdomen, the skin is soon off, well dusted with arsenic and alum; (I use the latter mainly to keep any one by accident from tasting the mixture, as a pinch of arsenic the size of a grain of wheat is a fatal dose). It is no trouble to skin a small mammal and make them into hand specimens; we leave the mouths open so that the teeth may be seen. Small turtles, frogs, snakes, and fishes I keep in strong alcohol—a couple of Mason's quarts serve the purpose; when I want one I take it out with pincers, rinse it in water if need be, give a lesson on it and return it to the can. Afraid? No. Children do not know fear only as it is taught them, and to an unsophisticated child a green snake, a turtle, or bright-eyed toad is as beautiful as a butterfly or a redbird. Children's fears are only those of their parents and teachers. Insects? To be sure; we save them in boxes; each child has a cigar box of insects pinned and labeled. I don't know much about them myself; that is about the species. I use Morse's little *Zoölogy* as a guide to the work on snails, shellfish, insects, and the like.

But there is no analytical work on insects, such as Gray has given us on botany, and Jordan on vertebrates; I have Prof. Cyrus Thomas' Illinois report on beetles, and am analyzing our commoner ones for my own satisfaction. As to infusorions, most of them are too small to teach objectively—to be sure we have chalk, the sponge, etc. I have found large masses of the fresh-water sponge, and the fresh-

water polyp alive in our rivers, but we can not do much with the radiates in objective school work. I have a few specimens that I got by exchange.

My idea of the natural sciences in the district and lower schools is that they are designed to develop the observing and manipulative powers; it is not so much odds whether you use botany, zoölogy, or minerals to this end, so that you accomplish it. Didn't learn much natural science in the high school, and the normal school was worse; trouble was they covered the whole field, and the cover was thin—there was abundant superficies, but little depth. But they made us "gee up" on methods and classifications though. When I came to teach I found I had to fish with my own hook and line; as a diversion I took up natural history with manuals and collections in outdoor weather, and English authors for in-doors. The result is I have kept my health and patience, have in five years made a good working collection of plants, animals, and minerals, besides dipping into fossils a little—but they are too much like the dead languages for my taste.

Bulky, you say? Oh no! I can pack my whole cabinet in a Saratoga trunk, and I wouldn't take a new silk dress and a set of Dickens' for it.

Well, good bye; come over some day, and I will show you my collection of minerals—not much silver or gold or precious stones among them, but they have been a mine of use and solace to me. I shall collect some more on my summer vacation. So long. X.

BOOK TABLE.

The *Christian Union* has begun the publication of a series of historical articles entitled "Papers from Sir Guy's Trunk." These will give a vivid picture of New York, in colonial times, as seen through the eyes of Sir Guy Carleton, the British Commander-in-Chief during a part of the revolutionary period.

History of American Politics. By Prof. W. R. Houghton, of Ind. University. Indianapolis: F. T. McNeely & Co.

This book is not partizan, but gives a true historic statement of the various political movements and incidents in the growth of our country. All the campaigns, party platforms, presidential candidates, cabinets, votes by states, compromises, etc., etc., are given in full. Altogether the book is just what any one interested in the political history of the country needs. Sold by subscription.

Outline Maps. By Ethell & Davis, of Muncie, Ind.

These Outline Maps are intended to "save time." The outlines being given pupils are expected to fill up by locating important places, indicating smaller divisions, representing elevations, depressions, mountains, rivers, etc. They will supplement any text-books on geography. The importance of map drawing need not be urged.

The *Midsummer St. Nicholas* is truly a holiday number. Girls and boys who enjoy fishing will devour first of all an article on "Fly-fishing for Black Bass," by Maurice Thompson. Those who admired the tact and ingenuity and common-sense of the "Tinkham Brothers" in the July No. will have their admiration greatly increased by the perusal of the August installment of this most excellent story. In "Lindy," we have a picture of a *true heroine*, an ideal for every boy and girl. Perhaps the sweetest article of all—if sweetest is the proper word—is the opening poem, entitled "The Beautiful Day," which we hope all who read this may see, read, and admire.

Dio Lewis's Monthly is the name of a new magazine just started, with Dio Lewis as editor, and Clarke Brothers, New York, publishers. Price \$2.50.

The first number is full of practical suggestions bearing upon the great questions of preservation of health. Dr. Lewis was educated as a physician and began the practice of medicine, but soon changed the line of his work; and since the year 1855 has been engaged in the "ounce of prevention" business. Such a magazine, extensively read, would exert a great influence for good. If doctors were paid for keeping people well, instead of for curing them, the world would be relieved of a great deal of suffering.

The August *Century* comes to our table with as great variety between its covers as is sufficient to meet the tastes of the multitude. Henry James has a striking and interesting article on Alphonse Daudet, the leading French novelist of our own day, whose portrait forms a frontispiece for this Midsummer Number. There is an *illustrated* article on our American bird, Bob White, and a second on the Culture of Olives in America. Another article on Carlisle, (I think the subject needs a little rest at present). While H. H. concludes her sketches of "The present condition of the Mission Indians in California," Mr. Howells continues "A Woman's Reason," and it is to be hoped that his story will not end until his heroine becomes a *reasonable woman*.

The pages in finer print at the close are fully equal to the standard of this most excellent magazine.

BUSINESS NOTICES.

WHO WRITE FOR THIS JOURNAL?

The following are a few of the regular contributors for the coming year: Geo. P. Brown, President of the State Normal School; Lewis H. Jones, Prin. of the Indianapolis Training School; E. E. Smith, Prof. of English Literature in Purdue University; H. B. Brown, President of Northern Indiana Normal School; James Baldwin, Sup't of the Rushville Schools and author of English Literature; John Cooper, Sup't Evansville Schools; John S. Irwin, Sup't Fort Wayne Schools; Joseph Carhart, Prof. of Elocution in the State Normal; A. W. Brayton, Prof. of Natural Science, Indianapolis High School; Geo. F. Bass, Supervising Principal, Indianapolis Schools; H. S. Tarbell, Sup't Indianapolis Schools; Howard Sandison, Prof. of Methods in the State Normal School; W. W. Parsons, Prof. of English History in the State Normal School; James H. Smart, President of Purdue University.

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NEW DEPARTMENTS.

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The *Department of Pedagogy* is conducted by Geo. P. Brown, Pres't of the State Normal School, and he has called to his assistance associate professors to write on subjects in their respective departments. No man in the State is better qualified to give to teachers the latest and most approved methods and philosophical underlying principles in educational work.

The *Primary Department* is conducted by Lewis H. Jones, Prin. of the Indianapolis Training School. Mr. Jones is a graduate from the advanced course of the Oswego Training School, and was for several years one of the most efficient and most popular teachers in the State Normal. His special business is to train teachers for primary work, and he has no equal in the State in this department. Primary teachers will get the best methods, and at the same time the principles underlying them.

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INDIANA " SCHOOL JOURNAL.

Vol. XXVIII.

SEPTEMBER, 1883.

No. 9.

ENGLISH INSTRUCTION IN THE PUBLIC SCHOOLS.

[A paper read before the Northern Indiana Teachers' Association at Island Park, July 11, 1883, by Prof. E. E. Smith, of Purdue University.]

An experience of a series of years in examining pupils for admission to the Academy of Purdue University has drawn my attention to the fact that those coming from the so-called grammar-school grades of the public schools, as a rule, stand lower in their knowledge of English than of any other "legal" branch. And both tests of, and experience with, these pupils have shown four things :

1. A great lack of ability, in ordinary conversation, as also in both oral and written recitations, to express their thoughts in respectable English.

2. A very general and hearty dislike for the study of English Grammar, of English Orthography, and of the lessons in English Reading.

3. An almost universal lack of attachment to or pride in their mother tongue, together with an equally prevalent ignorance of its history, its etymological growth, of its prose and poetical writers and their productions, and of the effect of literature in shaping their own lives.

4. A very common impression is that the English is a dead language, not a living one; that the teacher is a demonstrator of anatomy; that the text-book is only a set of dissecting instru-

ments; and that their duty is to cut up the corpse and analyze and display all the usual and anomalous forms that may fall into their hands.

I judge that my experience in this matter is not different from that of others, and that a paper upon this subject may not prove uninteresting or unprofitable.

A nation's language is a decisive indication of its national progress and national character. Equally so, a child's language is an exponent of the child's intellectual development, and if not of the quantity certainly of the quality of its mind-work. Back of the ambiguous, illogical, provincialistic or slang utterances lies the untrained or partly clouded mind, that only "sees through a glass darkly," or else "men as trees walking," and hence its expressions are vague and imperfect, or else stilted and pedantic. Hence a deficiency in the particulars enumerated indicates a radical error in the instruction given to our pupils. It is a matter of reproach that pupils spending so many years in our public schools, where opportunity for instruction in expression of thought is afforded in every branch studied, but particularly in three—grammar, spelling, and reading,—go away without ability to make known their thoughts plainly and properly, often without original thoughts to make known, without knowledge of or a craving for a good, pure and elevating kind of literature, and with a fondness for slang and low expressions as the most cogent and pleasant means of communicating with their associates.

To seek for the source of this state of things, and possibly for a remedy, is the object of this paper. If these are found, it is well. If not found, it is also well, as it may lead others to the discovery. The earnest seeker after truth always rejoices that there are stronger minds than his in the world, for what he may not do, those with the greater powers will accomplish.

INSTRUCTION IN TECHNICAL GRAMMAR.

We lay a large amount of the blame for the facts mentioned at the feet of one branch of study—Technical Grammar. Against instruction in English Grammar, as generally given our public schools, the following indictment is believed to hold:

(a.) It breaks in upon the proper order of the mind's growth.

(b.) It supplants other work which is in order and of far greater practical value.

(c.) It is a barren fruit tree, that has been assiduously manured for years, without adequate results.

(d.) The tendency of work in technical grammar is to cram, not to educate; to fill the mind with facts, forms, and "barren idealities," instead of unfolding the mental powers by use; and thus, by it, the acquisitive or absorptive powers of the mind receive an abnormal development, and this, too, at the expense of the imaginative and constructive.

(e.) From the fact that instruction (or the equivalent term to many—"hearing recitations") in technical grammar is routine work, after forms and an order already laid down by others, it is easier to the teacher, who is thus tempted to sacrifice duty to conscience, practical results to percents, and observation and original thought to plagiarism and superficiality.

These are grave charges. Let us examine facts and theories to test their correctness.

I. *Instruction in technical grammar in the common schools breaks in upon the proper order of the mind's growth.*

Pupils usually commence this study at the age of ten or twelve years. Their minds are immature. Observation, perception, and memory are chiefly active. They are ripe for the awakening and the cultivation of the imagination. The understanding and the reason are not in a state for active and profitable employment. Their knowledge is largely of things external to them, *i. e.*, to the mind itself, and comes through the senses, or personal experience. What judgments they have are largely summations of facts or phenomena observed, and inductions readily drawn from these. But technical grammar is deductive. It reasons from the whole to the parts, when the whole is not comprehended by the child-mind. It approaches the acquisition of knowledge through the line of rule, logic and principle. It commences with classifications and generalizations when the facts themselves are unknown. It launches definitions at the

child when the content of the definition has never been taught it. It thus violates the following principles of the mind's action :

- a. The mental faculties are not developed uniformly.
- b. Only a definite amount of energy can be safely put forth at a given time by a given mind, and any over-draft here weakens the mental powers.
- c. Elementary teaching should go from the known or familiar to the more difficult, and since words and clauses are merely means by which the mind records its consciousness for future use, the idea at this period should always precede the name or term.
- d. The most difficult of all thinking is *thinking about thinking* and forming judgments therefrom, and hence matters appealing mainly to the reason and the judgment should only come in an advanced course of instruction.

In order to come practically to a decision of this subject, I lay down the following principles as those that should govern in direct instruction in language :

PRINCIPLES.

1. Instruction in language has two objects—to enable the pupil to use the language naturally, fluently, and forcibly, and to enable him to judge of its incorrect usage by himself and others. The first involves composition work and develops linguistic powers ; the second involves analytic work and develops criticism. Both are necessary in a thorough writer and speaker, and should be cultivated in the order given.
2. English construction may be practiced as an art or studied as a science. The science examines the results of the practice. Considerable practice of the art—original, carefully planned, fresh and within the child-power, should at first precede and then gradually be accompanied by the analytic study.
3. The child first learns words for new ideas, then groups these to express new thoughts. This is the natural method of composition. Language is learned by fragments. One of my children first learned “dink” for *water*. He next learned the word “good” for sweet-meats, and shortly after, from experi-

ence, associated these and surprised me by the combination "good dink." He came to me later on with a hickory-nut. Desiring to test him, I waited in silence. He first looked at me, then at the nut, hesitated, and finally brightened up and exclaimed, "Peel it." At another time he came to his mother with the request that she would "needle" (*sew*) his torn dress.

4. *The child, in thus learning to use language, learns to hear and speak words and phrases as wholes. A single word represents a thought. Then a group of words. The latent processes through which his mind passes are of no concern to him. These he becomes skilled in without being aware of it. The study of these processes belongs to a more mature condition of his mind.

5. New words, however, do not necessarily convey new ideas. Words are not ideas, merely representatives of ideas previously existing. As examples, we may give a Cleveland, Ohio, child's definition of an angle—"Two nines, nigger, and a point (*two lines meeting in a point*)"; a Ft. Wayne young lady's definition of the earth's axis—"The imagery line upon which it performs its daily devotions"; a school-master's spelling *hazardous* "hazardess," defining it as a "female hazard"; and the remark of a farmer upon the train the other day that he "guessed P. M. Gen. Gresham was tired of a *judicious* life."

Words simply memorized are dead—are skeletons in the mental closet—useless rubbish, yet occupying space and calculated to alarm both teachers and the public. It is, therefore, linguistic suicide to have pupils commit terms and generalizations which are obscure or meaningless to them. Hence the error in teaching technical grammar as now done—in having pupils memorize definitions, forms and rules, and correct false syntax, when the whole thing, without its foundation work in language lessons—is arbitrary, artificial, distasteful and misleading.

6. A thought is conveyed by words properly arranged and understood. If the words are not clearly types of ideas, the thought is imperfect. Imperfect thought is characterized by imperfect expression. The pupil must first learn *words* and *how to*

*In this connection read Sir Wm. Hamilton's *Metaphysics*. pp. 492-500.

use them by synthesis; he may then profitably study their relations as thus used by analysis. "You must first have the stream before you can make its waters play about your grounds or sparkle at your fountains."

7. A grievous error in my teaching and in your teaching, and that has manifested itself over and over, injuriously and depressingly, in the teaching of the young, inexperienced and transient teachers, is this—the teaching of somebody else's thoughts and of somebody else's way of expressing facts and opinions. True teaching, while not neglecting or ignoring these *models* and *helps*, goes beyond and deeper than they go, in that it awakens quickness of perception and reflection, and forces independent thought which, through tact unperceived by the pupil, is formulated into system and directness. The pupil is taught *not alone to think, but to do*; not alone to do, but to do accurately, concisely and energetically. And in all this the teacher must keep just within and above the pupil's ability. He does not give a boy with a No. 6 head a No. 8 hat to wear, but lets him know there is a No. 8 hat which he may wear if his head grows up to it. The pupil is regularly exhausted, but kindly and uniformly shown a way of filling himself a little fuller than before.

"The way to resume is to resume." The road to ability in the use of language is through daily exercises in construction and expression—through regrouping, paraphrasing, composition of original observations and thoughts, both orally and in writing—in short, the telling by the pupil of both his own and others' thoughts *in his own way*. "Ease of style can only come by habit, and grace of style can only come of ease. Grace of temper, beauty of tone, individuality of expression, are of the essence of life as they are of the essence of style."

8. The way to judge and to understand language after it is written, is to judge it scientifically, *i. e.*, by logical analysis. Here higher instruction in grammar properly begins. "Grammar is the science of the sentence." In it, the sentence is the unit. To understand its parts, we must know their relations to the whole. To comprehend the whole, we must be able to sepa-

rate it into its parts intelligently. We make the unit by synthesis. The mind grasps it by analysis.

9. The study of the art naturally precedes the study of the theory. Children can readily be taught the art; only with difficulty, if at all, can they apprehend and appreciate the generalizations and abstractions of the theory. In short, the facts of language must be taught before their classification and definitions must be preceded by a revelation of their contents.

10. If we think, we must use words as the vehicles of our thoughts. Drill and testing in the use of words therefore produces and promotes thinking. Thus work in language, composition, construction, directly prepares the mind for and leads up to instruction in technical grammar. And this is specially true in English, where words and expressions are classified by the office they fill, not by their form, as in the "dead languages."

These principles are so clear that they seem almost axiomatic. That the theory is correct the writer has reason to feel confident, because upon them he has built up a series of language lessons that have stood the test of trial. But neither the time at my disposal nor the purposes I have in view in this paper, will justify their presentation here. I submit these propositions for the candid criticism of my hearers.

II. *Instruction in technical grammar supplants other work in instruction in English which is fitting, and is of far greater practical value.*

This I have partly shown in my proof upon the preceding proposition, namely, that it occupies the place in the course of study in the public school which should be set apart for frequent, painstaking and progressive instruction in the arts of inventing and giving expression to thought.

But further: work in school has two direct objects—(1) the acquirement of knowledge or facts; (2) and the acquirement of ability to use knowledge in developing the mental powers and in preparing for the every-day, business affairs of life. The great purpose of the school is certainly to train pupils to think—to use their brains systematically, perseveringly, earnestly, and with a design in what they do and a wise adaptation of means to ends.

But in all this work the teacher must not forget that the school itself is a means to another end—the making of the pupil's brain-power both available and valuable for the busy industries of life. We must build not alone for to-day, but for to-morrow and for eternity. The pupil must have an actual commercial, social and moral value when he goes out from the school walls. To this result in part, what knowledge the student has, must, so to speak, be at his tongue's end and his will's command. Thought does not rule the world. But thought expressed and combined with action does rule it. Knowledge is power. So are the coal and iron that lie in our hills. The power is chained down by adverse surroundings. So with words. Isolated, they are as dead as the blocks of coal. Rightly grouped and properly uttered, and they are levers by which men, communities and nations may be uplifted. Statesmanship and diplomacy, grandeur and sublimity, friendship and love, sentiment and pathos, argument and appeal—all are but words, and their potential energy becomes actual force just to that extent that they are properly combined. Hence the supreme importance of that instruction which shall enable the pupil to be master of words instead of being mastered by them.

Something is done in this line by many teachers. Much by a few. But the great mass of instructors in our common schools are following the old road, shaking the barren fig-tree, hunting for springs of refreshing waters in the desert, and filling themselves and their pupils with such husks as the swine do eat. And yet, as another says, "Never before has the demand for effective utterance been so great, or the cause of truth required so much earnest and forcible writing and speaking."

III. *Technical grammar, as now taught, is not productive of such results as justify the time and labor spent upon it.*

Grammar alone has little effect upon the speech of a people. As I have previously said, it treats the English language as if it were dead, not living. To the pupil below the high school or college it is dry, unsuggestive, meaningless. It is mainly form, arrangement, routine,—a house of scaffolding inhabited by skeletons. There is, to the ordinary school-child, no freshness, no

attractiveness, no purpose except the requiring of a task, in its definitions, its declensions, its conjugations, its analyses, its parsing, and its corrections of false syntax. Without the previous thorough training in language, to require or expect forcible expression, correct speech, or individual thought and opinion, is as arbitrary and unjust as Pharaoh's course in requiring the Israelites to make bricks without straw.

But it seems hardly necessary to pursue this phase of the discussion further. I have dwelt upon it to some length because, while theoretically accepted, it is practically inoperative. And the course pursued by the schools is doing no little amount of harm in that it blunts the powers and represses the energies of the pupils; in that, instead of determining the pupil to self-activity and throwing him largely upon his own resources, it makes it absolutely necessary that the teacher or the text-book should do the larger portion of his work for him; in that he is hurried into a wilderness of tall trees to shut out his sunlight, with numerous vines also to trip his unsuspecting feet, on a hunt for something without knowing what it is, and without ability to recognize it even when he finds it; "making his path thorny and his progress blundering and zigzag"; and in that it subverts the principles of elementary instruction by proceeding from the general to the particular, from the complex to the simple, from the unknown to the familiar, instead of gradually unfolding a study of great value for the exercise of the mind by such a course of work as will enable both pupil and teacher to see the end from the beginning. "Grammar is not the stepping-stone, but the finishing instrument."*

*Spencer declares— "As grammar was made after language, so it ought to be taught after language."

Dr. E. E. White says, in an excellent little manual—"Both philosophy and experience unite in affirming that grammar is not a child's study."

Supt. Wickersham, of Pennsylvania, states—"The arrangement of most of our grammar books is the worst possible for the purpose of teaching beginners. They commence by giving a definition of grammar, by stating its great general divisions, by fixing the number of Parts of Speech, etc., none of which generalizations can possibly be understood without at least some knowledge of the language. Previous to the time of their study of the science of grammar, pupils should have much practice in elementary composition."

Supts. Kiddle and Caulkins, of New York City, in their manual, provide that, before beginning the study of even the elements of technical grammar, five years of our common school time should be given to painstaking, persistent efforts to impart "the habit of using correct language."

GENERAL INSTRUCTION.

What has been urged against the common instruction in English grammar,—that it is given to training the absorptive powers of the mind and to neglecting the cultivation of the inventive and the expressive—is true, I think, of most of our public school instruction. Of the eight “legal branches,” all except penmanship, are certainly studies the pursuit of which is largely an accumulation of facts. And yet the demands of life are for men of action,—of constructive, propulsive and engineering force. If education makes men so deep that an ignoramus can accomplish before they have even planned, the hurrying business world will prefer the ignoramus and throw mud at the school system. And if education fills young people so full of facts that there is no room for anything else, not even a little common sense and old-fashioned honesty, then education is intended for ornament, not for use, and should be put down in the category of the luxuries, not of the necessities. And if the interested, solicitous and kindly disposed public keeps up its fire of suggestion and criticism as it has done for two years past, we would better examine ourselves to see if some of us have not the wrong cut to our educational gowns. Some of you are doubtless watching mine now with sharp scissors whilst I suggest that English Spelling and Reading not only should be, but *must be* taken from the column of studies that develop the receptive powers and put into the column of those developing the representative or the creative.

Or, to express my meaning differently, any knowledge is useful only in so far as it may be formulated into such a system as will become operative in men’s lives. Now this arrangement of knowledge can only be by means of words, and it will be more or less perfect as the individual has complete or partial control of language. Instruction in language and literature, then, lies at the basis of all training, and must be thoroughly given to change knowledge from the state of the possible into the state of the actual.

I am aware that the suggested change in the branches enumerated is being made by many; but I urge that it shall be both

more general and more radical in the following lines and for the reasons to be assigned :

READING.

The reading should be so taught as to give not only the pupil a hold upon literature, but literature a hold upon the pupil. It should enter into his heart, his brain, and his life as a perpetual *vis a tergo*—a force from behind—that pushes him on toward a higher, a nobler, a manlier life. Corruption of language readily leads to corruption of taste, and it is but a short step from corruption of taste to corruption of morals. Do these seem strong utterances? Are they not true? Is it not a common human experience that the literature the young become fond of and read, largely molds their lives? What a boy reads, especially if he reads it persistently and willingly, is of far more importance in shaping his future than all the moral lectures of teachers, the good advice of parents, and the thunderings against sin from the pulpit.

The teaching of reading, then, beyond the mere mechanical work of giving facts, training in pronunciation and enunciation of words and in vocal expression, must ever look to those higher ends—the formation of right tastes and the development of character. From reading largely come our ideals of life; our convictions of duty; our love for the good, the beautiful and the true; our hatred of wrong; our incentives to benevolence, to toleration, and to a broad and generous public spirit; and our patriotic regard for the traditions, the institutions, the people, the hills and valleys, the flowing streams and the expanded lakes, of the country that gave us birth. And from our reflections upon that which we have read, from the things which we have been led to observe, to experiment upon, to so work with as to make parts of our lives, come those powers of thought, of speech, and of action which make us forces among men.

Or, on the other hand, from our reading come false ideas of life and its purposes; an admiration for the rough, the brutal, or the sensual; a distaste for labor, manual or mental; an unwillingness to grow step by step and an eagerness to enjoy that which we have not earned; a blunting of the higher, purer, and

more delicate emotions of the soul; a breaking down of self-respect and self-control and an abandoning of our lives to selfishness. If there is one thing in our country to-day that I would, if I could, curse as Christ cursed the Pharisees whom he compared to whited sepulchres, it is the avalanche of weak, deceptive, immoral and vicious literature that is overwhelming the minds and lives of so many of our young people. "Ye vipers, how can you escape the damnation of hell!"

And the duty is imperative upon the teachers of our public schools to keep out this deluge of impure and diseased literature by so filling the pupils with proper sentiments, by so inculcating right ideas of life and its responsibilities, by so cultivating purer tastes, by so captivating the pupils with the nobler, the more useful, the more elevating, the grander thoughts of standard and acceptable writers, that there is no room for the evil. And this work must be done as part of the instruction in the English language and literature, for there is no other way in which it can be so well or so effectually done.

"But," says the already heavily-burdened teacher, "this means extra work and a good deal of it; it means the study of authors and of child-literature; it means the culling of gems and the planting of them both in the memories and in the intellectual and moral natures of the pupils; it means giving pupils men's characters instead of skeleton biographies of consecutive events; it means getting over only a few pages in the Reader, with possible complaints on the part of parents; it means turning the reading-lessons into lessons of intellectual discipline,—in cultivating appropriateness of utterance, accuracy of discrimination, and clearness of judgment; and it means giving to the pupils a purer thought and a cleaner speech." Even so. The way is hard. But I have not made the road; I have only pointed it out.

The length to which my paper has grown warns me that I must leave unsaid some things that press upon my mind. I shall be very brief in such other suggestions as I may offer for your consideration:

GENERAL SUGGESTIONS.

Besides these matters, which seem to the writer to form part of the system and of the substance of English instruction in our

public schools, also the following may, as far as practicable, be embraced in the course of work :

a. Something of the history (etymological) of words, showing that their forms are not arbitrary or capricious.

b. The spelling and defining of words as used in sentences dictated, and then a regrouping or new association of the words by the pupils, thus testing whether they are fully comprehended.

c. Occasional tracings of the relation between the condition of the mind and the forms into which its thoughts are put, thus discouraging the "I-know-but-I-can't-tell" class of students.

d. Occasional showings of the close relationship existing between a person's language and his character,—and of the effects of character upon language and of language upon character.

e. The arranging of moderate and suitable courses of reading, programmes of which are furnished the pupils as often as may be deemed necessary, from which the pupils may make selections, or may consult the teacher as to selections, who will also make suggestions as to how to read, what features are most important, the value of a note-book for a record, quotations and queries, etc., etc.,—the aim being to teach the proper use of books, and thus prepare the pupils for self-directed investigation and study.

Further than this there seems necessary—

1. A more direct training of teachers themselves for this work, by our normal schools.

2. For the present, the banishing of the text-book on English Grammar from all grades below the high school.

3. The banishing of instruction in any other than the English tongue from these same grades. The foreign element now learns too little of English. It speaks a conglomerated English, which Americans themselves are assimilating, so that the pure mother-tongue is being corrupted by this course of instruction. The Americans are acquiring a broken tongue, and the foreign-born youth, or the youth of foreign-born parents, looks upon English as a sort of inflection instead of an essential and worthy element in his newly-acquired citizenship. Pride of race should

not be sacrificed, but pride of nationality must be transferred from the Old to the New "Fatherland."

4. The beginning of exercises in the use of language when the pupil enters the public school and the continuing of such exercises till he leaves it,—the practice to be both in oral and in written work.

5. Lastly, let oral instruction in Grammar begin as opportunity may be afforded in the language drills, and lead gradually up to the point where the pupil can understandingly and profitably take the text-book on technical grammar.

The great object in all this work is to make instruction in English the stepping-stone to a useful, influential and successful life, after the pupil has been manumitted from the shackles of the school-master and his methods. *Per ardua ad alta.*

OLD CHIRON'S SCHOOL.

JAMES BALDWIN.

I.

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THE story of the development of the modern idea of school instruction—of its evolution, so to speak—is an interesting one, and as extensive as the history of civilization itself. Its complete narration would include not only an exhaustive history of education, but an investigation of the modes of thought and the progress of human intelligence from the very earliest periods of man's existence. It is my object in the present paper, merely to allude to a single phase in this process of development in order to illustrate the relationship existing between the mythical school of pre-historic times and the graded system of the present day. We, the school-masters of the nineteenth century, are too prone to imagine that we are the original discoverers rather than the mere improvers of all that is best in our methods of education, and that the schools of to-day have reached a degree of perfection hitherto unknown, and beyond which there is little to be desired. We fail to give due honor to our predecessors for what they have done, as well as to acknowledge the possibility of ad-

vancement on the part of posterity. Yet, long before the world had heard of graded schools, of normal methods, of the kindergarten, of the Quincy system of instruction, of paternal school boards and all-wise school committees, there were men who possessed somewhat accurate ideas concerning the nature of the child-mind and the processes of its education, and there were schools which—however faulty their methods—produced the greatest scholars, statesmen, heroes that the world has ever known. I shall be pardoned if, for the sake merely of illustration, I venture into the domains of fable, and call your attention to a school existing at a time preceding that of any historical records; for the pre-historic school of the Greek fabulists had its type and origin, no doubt, in reality as much if not more than in imagination alone.

The first school of which we have any account, is fabled to have been located among the wooded mountains of Thessaly; and the teacher who presided over it, was old Chiron the Centaur. A strange school-master was this Chiron—with the body of a horse, the face of a man, and the mind of a god—and yet we must believe that he was in many respects a model educator. In the first place, it is apparent that he possessed a reasonable share of good, "horse sense"—a quality which remains to be one of the first requisites of the successful teacher. He was noted for his acquaintance with the nature of the human mind, for his keen sense of justice, and for the depth and breadth of his wisdom. And his school was a school of heroes. He numbered among his pupils Hercules, the type of physical strength and perfection; Jason, the first of the great navigators; Esculapius, the founder of the medical profession; Acteon, a most devoted lover of the chase and of the woods; Achilles, the future hero of the Trojan war.

Judging from the results which attended his labors as an instructor, we must believe that old Chiron studied the natural inclinations and the peculiar mental and physical capabilities of each of his pupils, and that to each he gave that quality of instruction which would be of the greatest value to him when he should become a man. Besides this individual instruction, he

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trained them also in certain general accomplishments necessary to the well-equipped and perfect man of the period. He taught them how to wield the weapons of warfare and of the chase; how to ride, to swim, to endure fatigue without murmuring, to meet danger without fear; and, himself being skilled in medicine and surgery, he instructed them in matters pertaining to the preservation of health, the treatment of wounds, and the methods of securing the most perfect and symmetrical development of their bodies. But, while pursuing this intensely practical course in the education of his pupils, Old Chiron did not permit them to neglect those things which tend to soften the asperities of life and which cultivate the more spiritual side of our nature. Music was one of the branches in the curriculum of his school; and we have every reason to believe that music played no unimportant part in shaping the lives of his pupils and the destinies of those with whom they come in contact. Finally, to crown all, he taught them due reverence for the gods and a hopeful belief in the future emancipation of humanity. All honor to Old Chiron, the first of the school-masters! As relating to methods and accessories, there was doubtless much room for improvement upon his summer school in the mountains; but as to foundation principles, I doubt if, with all our modern notions and appliances, we have made much advancement upon them.

II.

Passing over the period of time which intervened between the golden age of poetry and fable, and the present age of steam and lightning and feverish enterprise, let us imagine Old Chiron as conducting a model graded school, such as was known in this country not many years ago. As superintendent of the school, he sits in his office and marks down on paper what each pupil shall do in a given length of time—how many lessons he shall recite, how many lines he shall write. More than this, he designates the manner in which his assistants shall give these lessons to his pupils, how many minutes shall be given to arithmetic, how many to physical exercise, how many to instruction in morals. He indicates everything in the course of study, as the geographer locates places on a map; and he marshals his pupils

and his assistants as a skillful player of checkers moves his men across the board. It matters not that hundreds of pupils are unknown to him,—he is supposed to understand their needs,—and that which is best for one is best for all. Hercules, Jason, Acteon, Esculapius, and Achilles—all being nearly the same age—are assigned to the same grade. Old Chiron orders that the same lessons, the same exercises, the same monthly examinations shall be given to all; he attempts to mould them all after the same pattern. If Hercules betrays signs of developing an undue proportion of muscle, he is forthwith fed on a lighter diet and warned not to attempt more than is laid down in the course; he is reminded that promotions occur only once a year. If Acteon, whose nature craves the freedom of the woods, and whose mind revels in the contemplation of nature's beauties, dare neglect the irksome study of grammar, in whose musty rules he can see no charms, he is forthwith regarded as a dunce and threatened with speedy "demotion" to a lower grade. The natural inclination of Esculapius to study the mysteries of the human system and to inquire into the healing qualities of herbs and minerals, is checked and discouraged in order that he may make his grade in arithmetic. Jason's passionate love for the sea is quenched, and his dreams of the Golden Fleece are obliterated by the mass of text-book rubbish through which he is obliged to struggle in order to pass the monthly examinations. And the wrath of Achilles, instead of remaining pent up in his bosom, to bring in after years "unnumbered ills to Greece," finds vent in futile outbreaks and acts of rebellion against the numberless printed rules with which Old Chiron's authority is hedged about.

Behold, at length, this class of heroes seated on the stage, on the eve of graduation! They have advanced regularly through the lower grades; they have completed the studies prescribed for the high school; they have attained the required average of eighty per cent. in their final examination, and they are ready now for the last turn of the crank which is to grind them out into the world. The graduation speeches are after the regulation

pattern. Hercules discourses eloquently on the "Chinese Question," although if he were engaged in conversation upon the same subject he would fail to express three sensible ideas. Acteon delivers a stirring encomium upon the character and public services of George Washington, which sounds strangely like some half-forgotten Fourth-of-July oration. Esculapius moralizes upon the pleasing and not well-known fact that "The night brings out the stars." Achilles, void of wrath, and all his fiery aspirations fled, recites a ten-page essay on "Home," which he has copied verbatim from the "Silver Censer." And Jason, the valedictorian of his class, having not quite forgotten the original bent of his inclinations, passionately exclaims, "The bay is passed, the ocean is before us!"

The audience is delighted. Bouquets are elegant and numerous. Everybody is convinced that this is the pleasantest occasion of the kind that has ever been known. The president of the board rises to deliver the diplomas to the worthy young men.

"Gentlemen," he says, "this is the proudest moment of my life. I have reason to believe that you are a class of more than ordinary merit and intelligence. I have reason to believe that Professor Chiron has done his whole duty in the matter of your education. The course of study which you have this day completed was planned with the greatest care, and is mainly my own work. As a class you have acquitted yourselves well; and I trust that you have learned that the public school is the great maker and perfecter of classes. Indeed, the school is not designed for individuals, as such—rather is the individual designed for the school. Here, no distinction is made either as to social standing or as to intellectual tastes and capabilities. Here, you learn to ignore your own preferences, your own dislikes. We have given you all the same food; we have fed to all the same mental nourishment; we have allowed you to nibble at almost every branch of human knowledge. If you failed to assimilate anything, if anything was distasteful to you or hard to digest, it was your fault and not that of the school. I have observed that a boy will eat most readily that which he likes best—such is the

fallen nature of man. Yet all food is nourishing, and we should learn to be satisfied with every kind of sustenance. That which is true with respect to our physical nature is applicable also to our intellectual wants. Those studies which are the most foreign to our inclinations and ambition, often prove to be the most valuable in after life.

"Reflect, my young friends, that this school is a garden, that Professor Chiron is the gardener, and that you are the plants which he has reared and tended with the most assiduous care. It is as a beautiful hedge-row that you appear to me to-night,—pruned and cultured until there is perfect symmetry in every part. It would never do to have one of you reaching out this way, another that,—Jason inclining towards the sea, Acteon towards the woods, Hercules towards the sun, Esculapius towards humanity, and Achilles towards divinity,—it would spoil the beauty of the hedge-row. I am glad to say that Professor Chiron has not failed to prune wherever necessary, and that, as you present yourselves for your diplomas, we behold you all straight, symmetrical trees, without any unsightly one-sidedness. Being of the same intellectual stature, it follows, too, that your tastes and inclinations have all been moulded after the same pattern, and that you have no special liking for anything. What you may become after you leave our garden, is a matter of no interest to us. Of course we hope you will do well; but, in any case, school will continue to keep, and the garden will turn out a new hedge-row every year. Gentlemen, as a class you have done well, and I present you with your well-merited diplomas."

Who is this president of the board? Can it be old Procrustes—he of the iron bed?

It would be interesting to know the after history of Old Chiron's graduating class. We can imagine that Hercules, after an unsuccessful course in business, found that his proper sphere in life was that of a city drayman; that Achilles attained distinction as a prize-fighter; that Acteon became a kind-hearted street loafer and dog fancier; that Esculapius, after being a school teacher, a preacher, and a lawyer—and in every case a failure—spent the last years of his life as a strolling vender of patent

medicines; and that Jason, following with greater persistency the bent of his youthful inclinations, rose from one post of honor to another until he found his level and the goal of his ambition among the deck-hands of an ocean steamer.

III.

I am happy to say that the once popular notion of a graded school as a vast machine, as a drill parade, as a garden of the William and Mary period, is fast giving place to more rational ideas. It lingers still in some of our towns, it refuses to be shaken from the minds of some of our educators who fail to see beauty in that which is not symmetrical, and who prefer clock-work to the mechanism of blood and brain. It is fast becoming recognized, however, that "there is as much science in developing the more ordinary faculties of the human mind, as there is in raising crops or extracting minerals from the earth, and that the training of the intellect will, in time, be by methods as easy, attractive, and natural as the training of the body." Machinery, traditions, military methods, theories merely as such, are being rejected. The teacher who is desirous of aiding in this reform will study the operation of the child's mind—not alone from textbooks and treatises, but by actual, patient, pains-taking observation. He will regard each child as an individual, with a destiny of his own before him, and a mind of his own to be provided for. And this child's mind will no longer be treated as "so much raw material to which any desired shape can be given, but as an organ which assimilates—a living, growing thing." The school of the near future—the result of all these processes of evolution, of all the experiments of preceding ages—will indeed be a garden; but it will be a garden cultivated for the sake of the plants, and not a collection of plants arranged and trimmed up for the sake of the garden. It will be a garden in which due attention is given to individual characteristics and individual growth, and the best qualities of each plant are cultivated and brought out. It will be a school in which *a priori* methods, arbitrary examinations, inflexible "courses of study," and all cut-and-dried processes are laid aside, and the education of the child is conducted on common-sense and scientific principles, with due appreciation

of the fact that the pupil is neither a machine nor an inferior being, but the man or woman of to-morrow, whose rights demand our respect, and for whose destiny in life the teacher is largely responsible.

DEPARTMENT OF PEDAGOGY.

This Department is conducted by Gao. P. Brown, President State Normal School.

SOCRATIC QUESTIONING.

THE importance of the nature and form of questions employed in school instruction is so great that we have determined to discuss the subject briefly in a series of short paragraphs in successive numbers of the Journal.

The attention is first directed to what is termed the Socratic method of questioning. It has its uses and its abuses, and the first step toward determining what these are is to get as clear an idea as possible of the method itself.

We will therefore go to the fountain head and give an illustration of the method of Socrates from a dialogue reported by Xenophon, as given in one of Prof. J. G. Fitch's lectures on Teaching. In subsequent papers the uses and abuses of this method in our schools will be considered.

Socrates met by chance a young man who was a great lover of knowledge, and after a series of questions secured his admission that the kind of knowledge he coveted was that which makes an able statesman and a good economist, which qualifies for command and renders a man useful to himself and others. By further questions it was agreed that what men need is a stronger sense of justice.

"What is justice?" asked Socrates.

"Assuredly," says Euthydemus, "there can be no practical difficulty in pointing out what is just and what is unjust in actions about which we are conversant daily."

"Suppose then," says Socrates, "we draw a line and set down

an A here and a B there, and arrange under these two heads the things that belong to justice and to injustice respectively."

"You may do so if you think that there will be any use in such a method."

"Now," (having done this), "is there any such thing as lying?"

"Most certainly."

"On which side shall we place it?"

"Under B, the side of injustice, certainly."

"Do mankind ever deceive each other?"

"Frequently."

"And where shall we place this deceit?"

"On the same side of the line."

"Selling people into slavery who are born free?"

"Still the same, certainly."

"But suppose one whom you have elected to command your armies should take a city belonging to your enemies and sell its inhabitants for slaves. Shall we say he acted unjustly?"

"By no means."

(Our reader may need to be reminded that in Greece at this time this was considered a truly just practice.)

"May we say he acts justly?"

"We may."

"And what if, while he is carrying on the war, he deceiveth the enemy?"

"He will do right by so doing."

"May he not likewise, when he ravages their country, carry off their corn and their cattle without being guilty of injustice?"

"No doubt, Socrates; and when I seemed to say otherwise I thought you confined what was spoken to our friends only."

"So then, what we have hitherto placed under the letter B may be carried over and arranged under A?"

"It may."

"But will it not be necessary to make a further distinction, Euthydemus, and say that to behave in such a manner to our enemies is just, and to our friends unjust, because to these last the utmost simplicity and candor is due?"

"You are in the right, Socrates."

"But how, if this general, on seeing the courage of his troops beginning to fail, should make them believe fresh succors at hand, and by this means remove their fears; to which side would we assign this falsehood?"

"I suppose to justice?"

"Or if a child refuseth physic he stands in need of and the father deceiveth him under pretence that it is food, where shall we place this deceit, Euthydemus?"

"With the same I imagine."

"And suppose a man in the height of despair should attempt to kill himself, and his friend should come and force away his sword, under what head shall we place this act of violence?"

"I should think under the same head as the former. It is clearly not wrong."

"But take care, Euthydemus, since it seemeth from your answers that we ought not always to treat our friends with candor and perfect truthfulness, which we have before agreed should be done."

"It is plain we ought not, and I retract my former opinion if it is allowable for me to do so."

"Most assuredly, for it is far better to change our opinion than to persist in a wrong one. However, that we may pass over nothing without duly examining it, which of the two, Euthydemus, appears to you to be more unjust, he who deceives his friend willingly, or he who does it without having any such design?"

"By Jove, Socrates, I am not certain what I should answer or what I should think, for you have given such a turn to all I have said as to make it appear very different from what I thought it. I fancied I was no stranger to philosophy, but now it seems to me more difficult, and my own knowledge of it less than I supposed."

✓ THE KINDERGARTEN.

A RECENT visit to a kindergarten has given us food for reflection. The teacher in charge seemed to possess the natural endowments and the training of an ideal kindergartener. She wa

a woman of beautiful spirit, and had the faculty of making her spirit contagious. The exercises were admirably performed. The numerous and intelligent visitors were enthusiastic in their praise. But if any one had formed the idea that a kindergarten had in it any of the spirit of play, he entertained that opinion no longer. It was work—hard, intense work for both pupils and teacher, and that continuously. The nervous energies of all were taxed to the point of fatigue. We have no doubt but that those children went through those exercises that night in their dreams. We experienced the pain of fatigue in watching them and working with them in our imagination, for we were as much interested as they. Subsequent reflection compelled us to say that if that is the actual kindergarten it would be better for the child to spend the first five years of its life in the freedom of home.

The error into which the kindergartner seems liable to fall of making the exercises too severe, arises from a want of a true conception of one of the functions of this school. It is to be viewed as a preparation for the primary school, but is not the primary school. It is the transition period from the reign of caprice and impulse to the reign of law with the child. There are two important transition periods in the education of a child: One is that in which he passes from the freedom of home, where most of his actions are prompted by impulse and caprice, to the restraints of the school, where he is compelled to conform his actions strictly to the will of another. The child's life at home is chiefly play. His life in school is work. If the transition is sharply and suddenly made from play to continuous work, there is an undue strain upon the child's nervous energies that is more or less harmful.

One of the functions of the kindergarten, it seems to us, is to accustom the child to this change by degrees; by a judicious admixture of work and play. The kindergartner needs to distinguish clearly between real play and seeming play. Not every exercise that has the form of play is play. In so far as the child feels that its actions are directed and controlled by some one else he is not at play, no matter how apparently free and joyous may

be his movements. In play there must be conscious freedom from such control. Now our criticism upon the exercises we witnessed is that under the form of play the children were made to perform severe labor, and that so prolonged as to reach if not pass the point of fatigue. It is a mistake to suppose that because the child is jumping about in some game it is not at work. He is conscious that the game is a mere fiction, and that it is obedience to directions that is expected of him. As well might the raw recruit try to make play out of his daily drill. We do not say that to secure an easy passage from play to work is the only function of the kindergarten, but that it is an important one, and if the child of three years is to be subject to the severe restraints of school life under the color of the freedom of play, then the kindergarten will be an institution that will work irreparable mischief. It will then be a fact (as it is now sometimes claimed to be), for which a sufficient reason can be given, that pupils who have had a kindergarten training are less able to do the work of the primary school than are those who enter school directly from the home.

INDUSTRIAL EDUCATION IN THE COMMON SCHOOLS.

ONE of the ancient philosophers in answer to the question, "What shall boys be taught?" is reported to have said, "What they will practice when they become men." This answer admits of more than one interpretation. The narrowest interpretation is that if the boy is to become a farmer the school must teach him farming; if a mechanic, the school must teach the particular branch of mechanism he is to follow. In short, the school is to teach the boy his trade, and thus take the place of the apprenticeship of former times. This is apparently the meaning of the talk that is heard about industrial education in the common school. We hold that the common school has no such function to perform. Its important function is to prepare the boy for his trade or vocation, but not by practicing the vocation.

Mr. Spencer insists that the study of science shall be substi-

tuted for the study of language, but he nowhere intimates that the practice of the art is to accompany the study of a science in the common school. Nor does he hold that the common school can do more than give instruction in the general truths of the few sciences of widest application. Biology, for instance, should be taught, but not with specific application to agriculture, or horticulture, or floriculture, or stock-raising, though the instruction given will have a general bearing upon all of these arts.

The school should contribute to the boy's intellectual education two things especially: (1) a knowledge of the fundamental facts of the different sciences, and (2) that discipline or training of the mind which results from the constructing of those facts into a science. The proper acquisition of the facts requires much practice in observation, and the construction of the science cultivates the logical faculty.

Now there are two ways of learning a vocation. The one is to begin by the practice of the art. If the boy would learn building, he begins by learning to use the hammer, the saw, and the chisel in obedience to directions. By degrees he learns the rules by which the different parts of the building are constructed. He learns "how to do by doing." He works in obedience to authority. The mental faculty chiefly exercised is memory. He becomes an artisan. He is blindly obedient to rule. His work has been aptly called that of "blind hands." He has learned his vocation as a man, by practicing it when a boy.

Another way of learning a vocation is by getting first a knowledge of the underlying facts, sometimes called principles, which the vocation is to be the expression of. The practice of every trade is merely the giving expression to a certain group of ideas which is called the theory or science of the trade. The artisan is blind to the science of which his trade is an expression. The artist sees in his trade only a mode of expression of a thought. Working from the stand-point of the idea he is free to change his form of expression to give the clearest and best utterance to this. He is not "blind hands," but every act is a conscious effort to realize an idea.

artisan's processes are mechanical, the artist's are rational

There is no vocation but has its artistic phase as well as its mechanical phase.

A broader interpretation of the ancient philosopher's instruction would be, that since the child is to be a rational being and not a machine when he becomes a man, he should be taught to act like a rational being and not like a machine in the school. I do not pretend that this is the meaning which this philosopher intended to have his words express. 'Even the great Plato taught that the ideal government should make it unlawful for him who had learned the trade of a shoe-maker to pursue any other trade or profession. His theory evidently was that if the man was to be a tailor the boy should be educated in the tailor's shop.

But the advocate of "wooden schools" in the place of the common school may say that it is the purpose of this reform to teach both the science and the art of carpentering.

Our reply is that the child's time can be much more profitably employed in learning the sciences themselves than in learning their applications. There is no such thing as the rational application of a principle of science by one who has not a knowledge of the principle. First the science and afterward its application. It is the business of adult life to apply and extend what the school has imparted. The period of school life is too short to spend a portion of the five or six hours per day allotted to it to the mere manual drill in the use of tools, and learning how to do a few few things by "rule of thumb."

We agree that science should have a more prominent place in the common school than it has, and that the "method of science" should prevail more than it now does in our instruction. But let us be spared the disaster of converting the common school into an apprentice shop, or attempting to teach the "Applied Sciences" before the Primary Sciences have been learned.



THE STUDY OF WORDS.

WHEN the pupil has been made familiar with primitive words, affixes, and prefixes in their various forms, his attention should

be turned to roots of words, or rather to the different groups of words, each group involving a certain root.

There are three processes by which the teacher may deal with these groups of words. The first and most common one is:

1. To state the meaning of the root.
2. To exemplify this meaning by giving words containing the root.
3. To call for other words involving the root, that may occur to the pupil.

Thus, the root to be considered in a certain lesson may be *dic*.

1. The teacher states that the meaning of *dic* is *to say or to tell*.
2. This meaning is shown by selecting certain words involving the root; as, *contradict*, *indict*, *indite*, etc.
3. The pupils are asked to give words containing the root, and such words as, *diction*, *dictionary*, *edict*, *interdict*, *dictation*, etc., are obtained.

This process, while the most common of the three, is of the least educational value, because it violates both the law of method and of completeness, and fails to give that mental discipline and that preparation for composition, which either of the other processes will give.

Another process is that which requires:—

1. The statement of the meaning of the root.
2. The explanation of the meaning by presenting words containing the root.
3. The giving of the *part of speech* and the *meaning* of derivatives, in order that the pupil may *construct* the derivatives.

Using the same root as before—*dic*—the work may be indicated as follows:—

1. The statement that the root means *to say or to tell*.
2. Its exemplification by giving certain words; as, *predict*, *indictable*, etc.

3. Questioning somewhat as follows:—

Give a *noun* denoting *one who has the power to say what shall be done*.—*Dictator*.

A *noun* denoting *the act of speaking well of any one*.—*Benediction*.

A noun denoting the act of speaking ill of any one.—*Malediction*.

A noun denoting that which is said out, and, therefore, that which is proclaimed to a people.—*Edict*.

A noun denoting a true saying, and, therefore, that which a jury would say concerning the guilt or innocence of an accused.—*Verdict*.

A verb denoting to charge formally with a crime.—*Indict*.

A verb denoting to tell beforehand.—*Predict*.

An adjective denoting anything which may be said of something.—*Predicable*.

The third process of dealing with roots is in its first and second steps the same as the second process, but it differs from it in the third step in that the mode of questioning is reversed, the teacher giving the derivatives himself, and requiring the pupil to give the part of speech and the meaning.

It will be seen that the three processes are alike in the first and second steps, the difference being in the third step.

The first mode of procedure is not very profitable for the reasons given above.

The second is the process that should be used in the main; and the third, being a more severe discipline, should follow considerable work under the second.

In dealing with groups of words, convenient subdivisions are observed by using as the basis of grouping, the various prefixes, and this is generally done.

A basis of division, however, that will disclose more clearly the essential nature of the words, is the various forms in which the roots appear.

The root of a group of words may assume different forms, and these different forms may be considered in a study of the group; as, *augo*, meaning to increase, assumes three forms—*aug*, as seen in *augment*; *aux*, as seen in *auxiliary*; and *auct*, as seen in *auction*.

It will be seen, moreover, that a word in any subdivision of a group, may have a double application, and when this is true, there will be two separate sets of derivatives originating in that word; for example, *defer*, meaning to put off, furnishes *deferer*, one who puts off; and *defer*, meaning to yield to the wishes of another, gives *deference* and *deferential*.

In all groups of words the attention should be held rigidly to these points both because of the increased power of discrimination that it gives, and on account of the much deeper insight into the meanings of the particular groups studied, which such attention would give.

Enough has been given to show that the original or literal meaning is often quite different from the current meaning, as, in the case of *defer*.

Two principles are to be held in mind here:—

1. Generally, a word does not have different meanings, but only different applications of one idea which it expresses; e. g., the different meanings, so-called, of *defer*, are but different applications of its fundamental idea—to *put off*.

2. The final purpose of the subject called The Study of Words is to give skill in determining the *current meaning* of words, in order that this skill may be applied in deciding upon the specific meaning of words in reading and other lessons.

In the light of the first principle, it will be evident that whenever a word presents a double sense, force and prominence are to be given to the literal or root meaning; and from the second it will appear that when the root meaning will tend to give a wrong idea as to the current meaning, this tendency is to be clearly pointed out.

The work in The Study of Words should not be *exhaustive*, i. e., not every prefix, affix, and root should be considered.

It should be *accurate* and *thorough*; i. e., the explanation of every prefix, annex, and root that is considered should be clear, accurate, and thorough. The main inaccuracy that may be observed in our schools is that by which one part of speech is rendered as an equivalent of another.

A knowledge of Latin is not essential to successful work with words. Some knowledge of that language, however, would enable the teacher to conduct the work more thoroughly and with deeper insight.

It will be seen from the work given, that the work with words is mainly limited to the groups of words that come into the English from the Latin. This indicates the truth that that is the part of our language which particularly requires explanation.

The Saxon part of our language does not so much need explanation, because :—

1. "It is the pupil's vernacular, which he gains in childhood by imitation, conversation, and by illustration by example."
2. "This part of our language does not exist in large groups like the Latin part, but in small groups formed by vowel changes."
3. "Lists of Saxon roots that might be assigned for study, are, in the main, given accurately in common English words themselves, thus making Saxon derivation, in large part, the derivation of English words from English words."

While this is the case, and while derivation ought, in general, to deal with the Latin part of the language, yet, with advanced pupils, where time allows, it will be found to be of great value to consider groups of words based on Saxon roots, e. g., *Stigan*, to mount or climb, giving *stairs*, *stile*, *stirrup*, *stalk*, *stack*, *stage*, *stag*, and *story* as applied to a building.

HOWARD SANDISON.

PRIMARY DEPARTMENT.

[This Department is conducted by LEWIS H. JONES, Prin. Indianapolis Training School.]

PRIMARY NUMBER.

SUBTRACTION.

FIRST lessons in subtraction should be given with objects, in order to give pupils a right knowledge of the real relation between the subtrahend and minuend. The usual way of teaching the first lessons gives to pupils the idea that the subtrahend and minuend are different numbers; while in fact the real subtrahend is a specified part (or sometimes the whole) of the minuend which is, by the conditions of every problem in subtraction, to be removed from the remainder (if any) of the minuend, in order that such remainder may be more easily and justly estimated. Care in the putting of the questions, even when objects are used, is necessary in order to make this point entirely clear to pupils. The common mode of reciting in which the

pupil, holding, for instance, four shells, and removing two, says, "Two shells from four shells leaves two shells," tends to perpetuate rather than correct the error in question, unless preceded by some work in which attention is specially called to the matter. A good way in which to make this preparatory study with the pupils is as follows: Hold four shells in your left hand. *Tr.* "How many shells have I in this hand?" *Pu.* "Four shells." *Tr.* "Watch and see what I do with them." *Tr.* removes two of the four shells and holds them in her right hand. *Tr.* "How many shells did I take away?" Some child is specified to answer, and says, "You took away two shells." (It is necessary in such work as this to have one pupil answer first, and then have the others to agree or disagree with him. This course avoids confusion of answers, and also necessitates close attention.) *Tr.* "I took away two shells of how many shells?" putting the two shells back while speaking. *Pu.* "Two shells of the four shells." The teacher should see that all the pupils coincide in this answer, and then remove the two shells again, asking, as she does so, "When I take away two of the four shells, how many shells are left?" Pupils observe, and answer, "Two shells." *Tr.* "Then four shells (showing all four together in her left hand) less two shells (removing the two shells) are how many shells?" *Pu.* "Two shells." Now drill pupils in the statement, "Four shells less two shells are two shells," while you perform the necessary movements with the shells. Next, have each pupil recite the same statement, handling the objects appropriately himself. Follow this work by the recitation of a similar statement about a large variety of objects; as, "Four beans less two beans are two beans," "Four grains of corn less two grains are two grains," etc. Each pupil as he recites and handles his objects for illustration, should stand in front of the class, and face them. Thus he is taught independence in recitation, and other pupils are more interested in listening. By the force of the illustration used above the word "less" in the statement has really come to mean "*lessened by the removal of,*" and so it will continue to mean to pupils while they perform subtraction with objects. Thus the terse statement "Four shells less two shells

are two shells," signifies to the pupil, "Four shells (a definite number) *lessened by the removal of two of them*, are two shells;" and the real process of subtraction, viz., *the diminishing of the minuend by the removal of a specified part of it*, is thoroughly impressed on the notice of the pupils.

If the teacher prefers to have the pupils recite according to the formula "Two shells from four shells leave two shells," she can do so by taking one more step, and then pupils will *think* the correct process of subtraction while reciting the statement, though the statement does not express the proper process to children without this previous careful teaching.

The step necessary to take in making the change of statement indicated, is as follows: *Tr.* Holding two shells in each hand, and referring to those in the right hand, says, "Then two shells from four shells (putting the two shells in right hand with the two in the left hand) leave how many shells? (removing the two again and referring to those remaining in the left hand). Pupils will thus see the idea and easily carry the correct thought into the new statement.

When this work has been well done the pupils are prepared to understand thoroughly, and with little trouble, the one difficult thing in primary subtraction, viz., to perform the subtraction when the figure in any place of the subtrahend represents a larger number of units of that order than does the corresponding figure of the minuend. How to simplify this process, and teach it without resorting to the unsatisfactory process of "borrowing," will be the theme of another paper.

PRIMARY READING.

In the first reading that children do, the clear comprehension of the thought to be expressed, and the intense feeling of the emotions involved, are great helps to appropriate delivery.

But it is an inherent difficulty of the subject of Reading, that the child must reach this comprehension of his subject and this affectional sympathy with his theme, through the interpretation of arbitrary signs—*words*. These words are, for the most part,

devoid of interest to the child, except as they are connected with their appropriate ideas.

In the first learning of a word, therefore, every means possible should be taken to lead the child to associate the word closely to its idea *while he is interested in the latter*; thus transferring to some extent the *interest in the idea* to the *word*, as an *association*,—making language, thus, rich and significant. Teachers have made vast progress in this particular part of the teaching of Reading, within the last few years; though much remains yet to be done in order to have the average teacher become an adept in exciting, by conversations and questions, this necessary precedent thinking.

Even when a teacher has succeeded in the work above indicated, and her pupils converse intelligently on the lesson, showing by the sparkle in the eye and the flush on the cheek, a real interest in the subject, she is often disappointed, because when she turns the attention of her pupils to the printed text embodying the same thoughts, the children stumble over the words, and resume the "school tone" which she had so hoped to avoid.

The chief trouble in it all, as it seems to the writer, lies in the obstruction to thought and emotion caused by the half-learned words and phrases of the text. Most of our "new methods" provide only for the interested *cognition* of the words of the reading lesson, and make little provision for that *rapid* and accurate *re-cognition* of words so necessary in correct reading. It is therefore not enough that the child *learn* the word and its meaning, but he must so learn its form as to *recognize* at sight the *form* and *name* of each word, and associate without effort the meaning with these. This implies much repetition; for, while a word may be fairly cognized at one act of knowing, it is only *re-cognized* readily after frequent and spirited *repetition*.

In many cases, however, this repetition degenerates into lifeless word-calling, in which teacher and pupils lose all interest, and in which every process becomes mechanical and stultifying to the quick instincts of childhood.

The writer has sometimes used the following plan, to supply the "missing link" between the cognition and the recognition of words:

Suppose the pupils have had the meaning of the words, and their name associated with their form by interested conversation, but that they are not quite familiar enough with the difficult words of the lesson to read at sight. Have all pupils open books at the lesson, the teacher also doing the same. As the teacher stands before her class she calls a word (probably a difficult one in the first or second line) without specifying exactly where the pupils will find it. At once the search begins, busy eyes and busy fingers, until at last as the eye recognizes the word among its fellows the finger indicates which one it is and the child speaks the word. No child is allowed to speak the word until his own finger has touched it in his own book; so if the teacher is vigilant there is no chance that one pupil will profit by the work of another pupil, but must do the work necessary to the proper discrimination of the words for himself. The proceeding is sufficiently like a game to excite the greatest interest in the search, and to develop the greatest skill in quick recognition; while the close scrutiny necessary to be given to the surrounding words gives the intense comparison and contrast so necessary to perfect memory and ready recollection.

When all have found and spoken the word indicated, another is given and the search continues with unabated interest until the words of the reading lesson have been subjected to a close, interested, comparative attention. After thorough study of this kind the words so studied are not so likely to clog thought or repress emotion.

Of course the exercise indicated can be varied through countless forms, so as not to weary with mere repetition; for whenever the interest in the search is lost, the spirit of the exercise has departed.

SCHOOL ORGANIZATION.

Having discussed in a previous paper the subject of organization as it appears in its lower forms, it is appropriate now to enter immediately upon the discussion of its characteristics and processes as they appear in the public school. The school is a human institution, wrought out by human thinking, and object-

ified in the forms in which we are accustomed to find it. Its form will change somewhat from time to time, as its purpose, and the adaptation of means to the realization of this purpose become better understood.

The real organs of the school are two; viz., the teacher and the pupil. It is out of the peculiar nature and condition of one of these organs—the pupil—that the purpose of the school has its source. His nature is that he is a *human spirit*; his condition is that he is connected with a body and is *undeveloped*; i. e., he is an *undeveloped human spirit*. He must be initiated into the mysteries of the external, business, social, and political worlds about him, and through worthy living in these, prepare himself for a higher existence. The purpose of the school is, therefore, substantially, *to develop and train the valuable endowments (powers and capacities) of the pupil; to give him a just conception of the true dignity and purpose of life; and to teach him so much of the arts and sciences as shall fit him for the practical duties of life.*

With the nature of the child, and the purpose of the school thus outlined, we may take the next step of the investigation. The teacher and pupil must become so related that the purpose of the school shall be realized in the pupil. The relation to be thus established is essentially a psychical or spiritual one, though there are many physical conditions which must be taken into the account at the proper time and in their proper places.

The relation which school organization aims to establish between teacher and pupil, may be analyzed, for study, into its elements. Some of the most important of these elements are the following:

a. Teacher and pupil must come to have a common object or purpose in view; viz., the realization of the purpose of the school in the pupil. The teacher should comprehend this purpose very fully from the first; while small pupils can only do so at first in its simplest phases. While the pupil's view of this purpose is only partial, it may nevertheless be made very intense.

b. The teacher and pupil must come so to value this purpose of the school that they will have common aspirations toward its

achievements; i. e., they must have a common longing or desire to fully realize the purpose of the school for the pupil. The teacher who does not earnestly and intensely long to realize the ends of the school for his pupil, is greatly deficient either in native endowment, or in preparation for his vocation; while the pupil who does not intensely long for its realization in himself, in some of its phases, has not yet really become an integral, organic part of the school, though he may be present, as to his body, every day.

c. Teacher and pupil must put forth common efforts toward the attainment of the purpose of the school in the pupil. If the teacher tries ever so hard *to teach*, but does not secure the coöperation of the pupil in trying *to learn*, there is no real school. Only when both *unite their efforts*, each in his own particular function—*put forth common efforts*—is there real organization of teacher and pupil into *a school*.

d. Teacher and pupil must come to have strong common sympathies,—exulting over each other's successes and sorrowing over each other's failures.

These four elementary relations (a, b, c, and d, above) are the chief ones which, when wrought together, constitute the grand psychical (or spiritual) relation in which the teacher and pupil must stand to each other to constitute them a school. Each of these relations may exist in any one of various degrees, according to the ability of the teacher as *an organizer*, and to the character of the children that are to be the pupils.

Each of these relations is both a cause and an effect, in its associations with the others; and the thorough comprehension by the teacher of this important fact, leads the teacher to organize her school through and by means of its daily work.

For instance, a clear view by both teacher and pupil of the real purpose of school work, and the finding that both are honestly aiming at the same end, tends to make both of them unite in their wishes or longings for its realization, until at last their aspirations have become alike from their blendings, and each has become intensified from the influence of the other. Common aspirations are thus seen to be to some extent the *effect*

of common purposes. But when once teacher and pupil come to have common aspirations toward the proposed end, each will be able to assist the other in getting clearer views of that end, to hold that end more constantly, distinctly, and consciously in view. Thus common aspirations, by a reflex influence, become *cause* of common purposes.

The illustration is much clearer and stronger in the next case. When pupils and teacher have strong common sympathies in respect to their work, the best conditions exist for the putting forth of common efforts; thus the latter is the effect of the former. But people who put forth their efforts together for long periods intensify greatly their aspirations and sympathies; thus by their reflex influence common efforts become *cause* of common aspirations. So it is throughout the entire list; and, the teacher who secures for herself and pupil on any day a clearer common purpose, an intenser common aspiration, a more united effort or a stronger common sympathy, has taken a decided step toward the real organization of a true school, and set a *cause* at work whose effects will always be in the direction of good order and right achievement.

When the relations and conditions above mentioned are secured, it is interesting to notice how fully such school answers to the definition of an organism. In such a school, teacher and pupil will be engaged strictly each in his distinctive function—the *teacher* in *teaching*, and the *pupil* in *learning*. This exclusive attention of each organ to its own peculiar work results in prosperity *to the whole school*. The whole school being thus prosperous is able to give back to each member *much more good* than individual effort could achieve, and *some kinds of good* which could never be achieved even in their lowest degrees by individual effort. This really organic character of a true school might be illustrated at greater length, but it seems unnecessary to do so.

Another paper will treat of the detailed steps necessary in organizing a school.

OFFICIAL DEPARTMENT.

[From the Letter-Book of the Superintendent of Public Instruction.]

FAILURE OF TRUSTEES TO QUALIFY.

[From Letter Book G, page 352.] When the law requires an officer to qualify and give bond, he can not perform the duties of his office till he has done so. If a person elected or holding over as school trustee, fails to give bond, the town trustees may, after the expiration of the five days allowed for that purpose, declare the office vacant, and elect another person. The new school board, as finally constituted, may then set aside as null and void acts of the preceding board that were carried by the vote of the unqualified member and but one of the other members. Two members of a board of town trustees, or of a town school board, can transact business and hold elections, provided both members have been duly qualified and given their bonds.

EXAMINATION IN ADDITIONAL BRANCHES.

[G, p. 350.] The law requires trustees to have taught in the schools certain enumerated subjects, "and such other branches of learning and other languages as the advancement of pupils may require. The state attempts to guarantee to the pupils the competency of the public school teachers for the work they are to do. This it does by requiring them to be examined and licensed.

Ordinarily an examination in the eight enumerated branches is sufficient, but when a person is to teach other branches, his proficiency therein should not be left to be inferred. He should be examined by the county superintendent in the other branches, which he is expected to teach. This is nowhere expressly commanded by the law, but is an obvious inference.

The above are selected from my recent decisions.

JOHN W. HOLCOMBE,

Sup't Public Instruction.

BLOOMINGDALE.—D. W. Dennis, principal of the Bloomingdale Academy, arranged for a grand reunion of the old students and friends of that institution, which was held August 30th. Among the speakers were J. J. Mills, W. R. Harrison, Hiram E. Hadley.

LADOGA NORMAL.—The entire faculty of last year have retired, and the new one has not yet been announced.

EDITORIAL.

Persons sending money for this Journal can send amounts less than \$1 in three and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

The article in the July Journal entitled "Should Pins have Points," should have been credited to the *Iowa Normal Monthly*. We beg pardon for the oversight in not giving proper credit.

The large amount of other matter this month makes it unnecessary to give the usual amount of editorial. Special attention is called to the merit of the various articles: there is not one which will not richly repay the reading.

The first of a series of articles on Reading, by Prof. Carhart, of the State Normal, after being put in type, has been unavoidably crowded out till next month.

A NEW DEPARTURE—ST. JOSEPH CO. TAKES THE LEAD.

At several different times attempts have been made to amend the school law so as to make provision for more institute funds. There has been an effort to increase the county appropriation, which is now only \$50. Legislators, however, have more readily adopted the idea of levying a small tax upon the teachers, and seeing the good results to accrue, a large majority of teachers have concurred in this method. Several revisions of the school law containing this feature have failed on account of other disputed points.

In the absence of law the teachers of St. Joseph county, by a vote, authorized the superintendent, Calvin Moon, to levy a tax of 50 cts. upon each teacher licensed. This plan has been carried out for the past year or two, and works admirably. Teachers respond cheerfully. The superintendent gives each a receipt, and deposits all such money in a bank as a separate fund.

This gives money sufficient to employ the best talent for the entire week, and the work is altogether more efficient and more satisfactory.

That more money is needed to make institutes most profitable is certain. That this increase of money should come from the county

fund is certain. That it is wise economy on the part of teachers to supplement the present county fund, which can not now be increased, is certain. If teachers are to be called upon at all, that the plan of taxing each one examined a fixed sum is most equitable, is certain.

CONSOLIDATION OF STATE COLLEGES.

Since the burning of one of the buildings of the State University, much has been said by the state press in favor of removing the University and consolidating it and the State Normal School with Purdue University. This is urged as an economic movement, and as the only plan upon which a great State University can be maintained.

The Journal wishes to put itself unconditionally on the ground of *non-consolidation*. The move would result in the saving of a little money (much less, however, than generally supposed), and also in the practical annihilation of two of the institutions.

The State Normal School has its own purpose and characteristics. It admits only such as declare their intention to teach, and its sole purpose is to make teachers. Its course of instruction is arranged for the teacher. Its instruction is from the professional, and not from the academic standpoint. Its pervading spirit is professional.

Purdue University has in view another very distinct purpose, and if successful must be pervaded by a very different atmosphere. Its great aim is to promote the agricultural and mechanical industries, and inspire a love for them. Its students are trained in the science and the practice of these industries. That the institution may be able to educate its students into them, and not out of them or away from them, it must be separated from antagonizing influences.

The State University is a strictly literary institution, and of necessity pervaded by a spirit differing from each of the others.

Should these institutions be consolidated, the new university would as a matter of course be controlled by the stronger spirit or influence, and there is no doubt as to which this would be. The literary spirit would be dominant and overshadow the others.

The above is not theory, it is common sense, and experiment has demonstrated it.

There is neither a normal school nor an agricultural college in the United States connected with a literary institution that is a success.

REMOVAL OF THE STATE UNIVERSITY.

The removal of the State University to another locality is an entirely distinct question, and one upon which the Journal does not care at this time to express an opinion. If Monroe county will impose a tax upon itself, as it can well afford to do, and thus restore

the burnt building, that will likely settle the matter for all time to come. But if the matter is left open till the Legislature meets there is no telling what will be done. That steps are already being taken by at least two other places to secure the removal, is definitely known to the Journal. The arguments for and against the removal will be submitted in due time.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR JULY.

READING.—1. What preparation should be made by the teacher to teach a class to read a selection in the Fifth Reader? 20

2. What use can such a class make of the Dictionary in the preparation of the reading lesson? 20

3.

BURIAL OF SIR JOHN MOORE.

Not a drum was heard, not a funeral note,
As his corpse to the rampart we hurried;
Not a soldier discharged his farewell shot
O'er the grave where our hero was buried.

We buried him darkly at dead of night,
The sods with our bayonets turning;
By the struggling moonbeam's misty light,
And the lantern dimly burning.

No useless coffin inclosed his breast,
Not in sheet nor in shroud we wound him;
But he lay like a warrior taking his rest,
With his martial cloak around him.

Few and short were the prayers we said,
And we spoke not a word of sorrow;
But we steadfastly gazed on the face of the dead,
And we bitterly thought of the morrow.

We thought as we hollowed his narrow bed,
And smoothed down his lonely pillow,
That the foe and the stranger would tread o'er his head,
And we far away on the billow.

Slowly and sadly we laid him down,
From the field of his fame, fresh and gory;
We carved not a line and we raised not a stone,
But left him alone with his glory!

- a. Of what is this poem a description?
- b. What is described in each stanza?
- c. What was the cause of the death of Sir John Moore? 40

4. What information should the teacher give to the class, or lead them to obtain for themselves preparatory to reading this poem? 20

ARITHMETIC.—1. Write in words the meaning of the following:
 $\frac{7}{8}$; M. 5. 5.

2. $\frac{2}{3}$ of 25 is $\frac{1}{2}$ of how many times $\frac{2}{3}$ of 6? 5. 5.

3. Reduce $\frac{2}{3}$ of $\frac{3}{4}$ of $\frac{5}{6}$ of $\frac{7}{8}$ of $\frac{9}{10}$ to a decimal. 5. 5.

4. What will an embankment 2 kilometers long, 1 dekameter high, 7.5 meters broad at the base, and 4.5 meters broad at the top, cost at \$300 a cubic dekameter? 5. 5.

5. For how long must \$1,800 be loaned, at $3\frac{1}{2}\%$ per an., to bring the same interest as \$1,500, loaned for 9 months, at 7% per an.? By proportion. 5. 5.

6. What must be the face of a note for 60 days, which, discounted in bank at 10% per an., will yield \$982.50? 5. 5.

7. Divide \$5,356 in the ratio of $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$. 5. 5.

8. A farm that is three times as long as it is wide contains 30 acres; how many rods long is the farm? 5. 5.

9. How deep is a cubical bin that holds 1,728 cubic meters? 5. 5.

10. Divide \$189 between three persons, so that the second shall receive twice as much as the first, and the third twice as much as the second. 5. 5.

ORTHOGRAPHY.—1. Spell twenty-five words selected by the superintendent.

THEORY OF TEACHING.—1. In what do the relations between teacher and pupil differ from those between parent and child? In what do they agree?

2. What is reflection? Why should it be cultivated?

3. How can a pupil be induced to give attention?

4. Why does repeating a thing tend to fix it in the memory?

5. Why is it that memory studies are the best for early childhood?

NOTE.—The superintendent is advised to give credit to the applicant for the intelligence manifested by his answers rather than for their conformity with his own notions of their correctness.

GRAMMAR.—1. Define grammar as a science; as an art. 5. 5.

2. What is the basis for the classification of words into parts of speech?

3. Write a sentence containing an abstract noun; a sentence containing a collective noun in the singular; a sentence containing a collective noun in the plural. 4. 3. 3.

4. Define a relative pronoun. Name the relative pronouns. State the two offices of a relative pronoun in language. 3, 3, 4
5. What is declension? 3, 3, 4
6. Define an infinitive; a participle. Write the infinitives and participles of the word *know*. 3, 3, 4
7. Correct the following sentence and give reason for the correction: The fact of me being a stranger does not justify his conduct. 5, 5
8. Analyze the following sentence:

"He is the greatest artist, then,
 Whether of pencil or of pen,
 Who follows nature."
9. Parse the italicised words in the above sentence. 2, 4, 2, 2.
10. Punctuate the following sentence: "A principle which is equally true in morals and in mathematics is that strength of material or of mind or of men is always most available when it is applied closely around a single point."

GEOGRAPHY.—1. Define latitude; longitude. 5, 5.

2. What causes the variation of temperature in different parts of the earth? 10
3. State the causes of the varying lengths of day and night. 10
4. What are the boundaries of the several zones? 10
5. What is the general surface of the Pacific States and Territories? 10
6. Describe the two largest river systems of South America. 5, 5.
7. Describe the climate of the Selvas; of the Pampas. 5, 5.
8. Name the mountains and chief rivers of North Carolina. 5, 5.
9. Give the mountains and chief rivers of Tennessee. 5, 5.
10. How do ocean currents influence climate? In what way are they important to navigation? 5, 5.

PENMANSHIP.—1. Give the elements which form the following letters: *a, o, p, C, i*.

2. Analyze the following letters by naming the principles which compose them: *O, U, E, m, u*.
3. What is the height of *r* and *s*?
4. What is the object of the study and practice of principles, as such, when learning to write?
5. What is a head line? What is a base line?

NOTE.—Require the applicant to copy the specimen in ink. The superintendent should mark it from one to fifty, according to merit.

U. S. HISTORY.—1. What is the relation of Physical Geography to History? 10

2. By people of what nationalities were settlements first made in Massachusetts, New York, New Jersey, Florida, Indiana? 5 pts, 2 ea.

3. *a*. Name two eminent foreigners who aided us in the Revolutionary War, and *b*, indicate their services. a 4, b 6.
4. *a*. What was the embargo of 1807, and *b*, what did it accomplish? a 3, b 7.
5. Name the three most important American inventions. 3 pts., 4 off each om.
6. Write a sketch of the battle of New Orleans. 10
7. Name three turning points in U. S. History since 1850. 3 pts, 4 off each om.
8. Tell why you think the three events just named were cardinal events. 10
9. *a*. Name three ways in which the United States has acquired territory, and *b*, give illustrations. a 6, b 4.
10. Who are the Mormons? 10

NOTE.—No answer to exceed ten lines.

PHYSIOLOGY.—1. Wherein do arteries and veins differ?

2. What large vessel carries venous blood from the abdominal viscera to the liver? What vessels conduct the blood from the liver to the heart?

3. In what respects do arterial and venous blood differ?
4. State the difference between inspired and expired air.
5. How does the saliva affect the food?
6. What is chyle? How does it differ from chyme?
7. What are ligaments?
8. Where is the *cerebro-spinal* axis located?
9. What is an afferent nerve?
10. Of what are teeth composed? Name the different parts of a tooth.

ANSWERS TO STATE BOARD QUESTIONS FOR AUGUST.

ARITHMETIC.—1. In division the object is to find how many times a given number is contained in another, whether the number be integer or fractional. As a fraction represents an integer divided by another integer, or by a fraction, it follows that in any given dividend the fraction will be contained as many more times than the numerator as the denominator contains units. Inverting the divisor and multiplying will produce the end in view.

2. *a*. If a horse runs $\frac{2}{3}$ of a mile in $\frac{1}{3}$ of 3 minutes, he will run 1 mile in $\frac{2}{3}$ of $\frac{1}{3}$ of 3 minutes, or $\frac{1}{3}$ of 1 minute, or $3\frac{1}{3}$ min. *b*. If a horse runs 1 mile in $3\frac{1}{3}$ min., to run $\frac{2}{3}$ of 25 miles will require $\frac{2}{3}$ of 25 times $3\frac{1}{3}$ min., or 1 hour 36 min.

3. *a*. 6 books at $33\frac{1}{3}$ cents = \$2.00
 16 " " $12\frac{1}{2}$ cents = 2.00
 32 " " $6\frac{1}{4}$ cents = 2.00

Total, . . . \$6.00

b. $16\frac{2}{3}$ cents = $\frac{1}{6}$ of a dollar.

c. Therefore as one book costs $\frac{1}{6}$ of a dollar, 6 dollars will buy 6 times 6 books, or 36 books.

4. *a.* The solid contents of the ditch = 8 oc. m. $\times 4.5 \times 2.4 = 864$ c. m.
b. As one is a cubic meter there will be 864 loads.
5. *a.* From 10.45 P. M. till 1.25 A. M. = 2 hours 40 minutes.
b. As 4 minutes of time equals 1 degree of longitude, the second place will be distant from the first 40 degrees.
c. As the time at the second place is faster than that at the first, it must be east; therefore the second place is 40 degrees east of the first.
6. *a.* As 1880 was a leap year, February contained 29 days.
b. 29 days contains $29 \times 24 \times 60 \times 60$ seconds or vibrations, or 2,505,600.
7. *a.* A gallon contains 4×2 pints, or 8 pints.
b. 45% of a gal. is therefore 8 times 45% of a pint, or 360%.
8. As 2% of the tax is paid for collection, \$29,400 must be 98% of the whole amount collected, and that amount will be $\frac{100}{98}$ of \$29,400, or \$30,000.
9. *a.* $52\frac{2}{18} = 5\frac{41}{18}$.
b. $\sqrt{5\frac{41}{18}} = 2\frac{2}{3} = 7\frac{1}{4}$.
10.

24	16		
20	6		
6	200	424	16
4	8	20	6
8	6	4	200
	9	48	6
			9

67½.

GEOGRAPHY.—1. About one-fourth of the earth's surface is land. Continents are the great bodies of land on the surface of the earth.

2. The sea is the great reservoir of water. By constant evaporation the water is lifted into the air, in the form of vapor, and is borne by the winds to the continents, where it is condensed and falls in the form of rain. The rain which thus falls is spread over the continents, a part of it evaporates again, or is absorbed by vegetation, and a part of it sinks deep into the ground, and after winding about among the rocks finds its way to the surface in some lower grounds where springs are formed. The little brooks which flow from springs unite and form rivers; by these the water is carried into the natural hollows in the surface of the land and thus form lakes. The water from brooks, rivers and lakes, is constantly flowing down the slopes of the land, and a large part of it reaches the sea, from which it again rises in vapor and is again distributed over the land.

3. The largest and most powerful animals belong to the Torrid Zone, and those which are most useful to man are natives of the Temperate Zones. The largest marine animals belong mostly to the Frigid Zones.

4. The Alleghany and Blue Ridge mountains form the two ranges of the Appalachian System in the Middle States; the Appalachian in West Virginia and Pennsylvania, and the Blue Ridge in Virginia, Maryland, Pennsylvania, New Jersey and New York, are the principal

mountain ranges. The principal river in each State is as follows: The Hudson in New York; The Susquehanna in Pennsylvania and Maryland; the Delaware in New Jersey and Delaware; the James in Virginia; and the Kanawha in West Virginia.

5. In most of the Central States the surface is level or gently rolling; in Dakota, northern Michigan, and Minnesota it is elevated and rugged; in southern Missouri and eastern Kentucky there are ranges of low mountains. The system of lakes and navigable rivers of these States afford peculiar commercial advantages.

6. In regard to natural means of communication, fertility of soil, and vegetable productions, Brazil is among the most favored countries of the globe. It possesses rich mines of gold, silver, copper, iron, and several other metals. Among its chief productions are coffee, sugar, cotton, tobacco, corn, and tropical fruits.

7. The Dominion of Canada is north of the United States; Greenland and Iceland belong to Denmark.

8. St. Petersburg, on a number of islands in the Neva River; Moscow, near the center of Russia; Warsaw, on the Vistula; Odessa, on the Dnieper; and Kishenew, on Dniester, are the five largest cities in Russia.

9. Ft. Wayne is at the confluence of the St. Joseph and St. Mary's Rivers; Logansport is at the junction of Eel and Wabash River; Terre Haute is on the Wabash River; Jeffersonville is on the Ohio River; Michigan City is on Lake Michigan.

10. Isolated peaks and chains. A mountain system consists of several chains which pass across a country near together.

PENMANSHIP.—1. The whole-arm movement is produced by the action of the arm from the shoulder, resting the nails of the third and fourth fingers on the paper. This movement differs from the forearm and finger movements by having no fixed rest.

2. Form is the exact shape of a principle or letter, as it is perceived in the mind. The mind directs the movements of the hand and arm; and as writing is the result of muscular action, the mind must have a clear conception of what it wishes the muscles to do, before the action can be realized.

3. A line parallel to the horizon; a line at right-angles to the horizon; a line neither horizontal nor vertical to the horizon.

4. If from the centre of a circle a vertical and a horizontal line be drawn, meeting the circumference, and the smaller of the two arcs thus made be divided into ninety equal parts or degrees, a line drawn from a point on this arc 52° from where the arc meets the horizontal line, to the centre of the circle, is said to be on a slant of 52° . One drawn from a point 30° above the horizontal line is said to have a slant of 30° .

5. Seventh principle; second, second, and third principles; third principle; fifth and third principles; third and sixth principles.

PHYSIOLOGY.—1. Lungs, kidneys, large intestines, skin.

2. The lacteals are absorbent vessels which arise from the small intestines and unite to form the thoracic duct. Their function is to absorb the chyle and convey it into the circulation.

3. The blood conveys new materials to every organ of the body, and removes the worn out matter.

4. Larynx, trachea, bronchial tubes, air cells.

5. The changes produced in food by nutrition.

6. By the pylorus, and by the absorbent vessels in the lining membrane.

7. Ball and socket joint, hinge joint, sutures.

8. Inability to distinguish between different colors or shades.

9. The gray matter consists of microscopic bodies, called nerve-cells, and is abundantly supplied with blood vessels. The white matter is composed of minute fibres.

10. The wounding of the gray matter of the medulla oblongata, stops the action of the lungs, and causes death.

MISCELLANY.

The State Fair will open in Indianapolis September 24th.

There were ten graduates from the Salem high school last commencement, making forty-four during Supt. J. A. Wood's administration.

The Richmond Normal School will hold its formal opening ceremonies on the evening of September 7th, with an address by Dr. E. E. White.

The graduating exercises of the Dearborn county schools took place at Aurora August 10th. There were five graduates, the first fruits of the new system.

SCIENTIFIC.—The Indiana representatives at the American Association for the Advancement of Science were Prof. John M. Coulter, of Wabash College; A. W. Butler, of Brookville; Miss Lillie J. Martin, teacher in the high school, Indianapolis; Dr. H. B. Wiley, formerly of Purdue, and now chemist of the Agricultural Department at Washington; and Dr. A. W. Brayton, of Indianapolis.

Prof. John M. Coulter read an essay on the "Development of a Dandelion," which attracted close attention. A special botanical club was organized, with Prof. Coulter as secretary.

Dr. Wiley, whom we may still claim as an Indiana man, although he registers from Washington, read two papers: one on the relative nutritive values of the various varieties of wheat and corn as raised in the United States; the other on the composition of American butters. So great was the interest created in the last subject that the discussion was continued until next meeting. This meeting was one of special interest on account of the attendance of so large a number of representative men of science.

Improvements in Wabash schools take two directions. The corps of instructors is increased so that the coming year twenty persons will be employed as teachers; a new, eight-room building will be erected, and old buildings will be papered and such other repairs made as will put them in perfect order.

ANSWER TO QUERY.—Given $7(x^3 + y^3) = 9(x^3 - y^3)$ (1)
 $x^3y - y^3x = 16$ (2)

To find x and y —Solution.

From (1) we get $7x^3 + 7y^3 = 9x^3 - 9y^3$ (3)

Transpose. $16y^3 = 2x^3$ (4)

Divide by 2. $8y^3 = x^3$ (5)

Extract cube root. $2y = x$ (6)

Subst. value of x in (2). $4y^3 - 2y^3 = 16$ (7)

Simplify. $2y^3 = 16$ (8)

Divide by 2. $y^3 = 8$ (9)

Extract cube root. $y = 2$ (10)

From (6) we get $x = 2y = 4$.

ANSWER TO QUERY.—The capital of West Virginia is Wheeling; of Louisiana, Baton Rouge; of Montana, Helena; of Nevada, Carson City; of Arizona, Prescott.

SOME FACTS IN THE EARLY HISTORY OF THE INDIANA UNIVERSITY.

One of the sad losses by the recent burning of the Indiana University was that of the college records. Fortunately a large bound volume of old catalogues, etc., was at the residence of a Professor, and thus saved from the flames. In the present emergency a brief statement of facts in regard to the original early history of the institution will not be without interest to her friends and alumni.

In 1816 Congress set apart a township of land which was given to the State of Indiana for the support of an institution of learning.

The Constitution of 1816 made it the duty of the General Assembly of the State, as soon as circumstances would permit, "to provide

by law for a general system of education, ascending, in regular gradation, from township schools to a State University, wherein tuition shall be gratis, and equally open to all."

In January, 1820, the Legislature appointed trustees for the state institution, which was called The Indiana Seminary. This board met at Bloomington on the 15th of the following June, and selected the present site of the State University. Provision was made for the sale of lands and the erection of a building, and in May, of 1825 the seminary was opened with fifteen or twenty students. The first principal was Rev. Baynard R. Hall, who is still well remembered by the older citizens of Bloomington.* The number of students gradually increased, and in two years it was found necessary to appoint an additional teacher. Mr. John H. Harney, a mathematician of considerable ability, was chosen to the position in 1826.

By an act of the Legislature, passed in January, 1828, the name of the seminary was changed to Indiana College. The new board of trustees met on the 5th May of the same year and elected Dr. Andrew Wylie, President, at a salary of \$1000; Baynard R. Hall, Professor of Ancient Languages; and John H. Harney, Professor of Mathematics and Physical Sciences. The salaries of these Professors was fixed at \$400 each.

It is generally known that the late Hon. Joseph A. Wright, U. S. Senator, Minister to the Court of Berlin, and Governor of Indiana, was one of the first students of the Indiana College. The fact, however, that he filled at the same time the humble office of janitor may not now be so generally known. Students in the "pursuit of knowledge under difficulties" will read with interest the following resolution, extracted some years since from the recently destroyed records of the board of trustees. The date is May 5, 1828.

"Resolved, That Joseph A. Wright be allowed, for ringing the bell, making fires, etc., in the college building, during the last session of the State Seminary, the sum of \$16 25; also, for a lock, bell-rope, and broom, \$1.37½; and that the treasurer of the State Seminary pay the same."

The title of the Indiana College was changed to the Indiana University by an act of the Legislature in February, 1838. The friends and old students of the institution will be gratified to know that one of its distinguished alumni is engaged in the preparation of a history of the University from its origin to the present time.

DANIEL KIRKWOOD.

*Mr. Hall was subsequently the author of "Seven Years in the New Purchase."

P E R S O N A L .

A. P. Jones is principal at Morgantown.

O. H. Montgomery is principal at Courtland.

A. F. Sellers is the superintendent of the Westville schools.

W. H. Bartlett is principal of the high school at South Bend.

Geo. A. Powles is principal of the high school at Mishawaka.

A. E. Rowell will superintend the schools of Walkerton next year.

J. W. Love will have charge of the schools at Annapolis this year.

Ira G. Stark will have charge of the schools at Vallonia next year.

Virgie McNight will superintend the schools at Crothersville next year.

The schools of Rolling Prairie will be governed by O. L. Galbreath.

A. S. Custer, not C. S. Carter, will assist in the Crawfordsville high school.

D. D. Steiner will be at the head of the schools of New Carlisle the coming year.

E. F. Sutherland, formerly of Paoli, is now superintendent of the Orleans schools.

William H. Bass has been promoted to the principalship of school No. 14, Indianapolis.

J. Fraise Richard will conduct a normal at Mayfield, Ky., commencing August 27th.

A. H. Waterhouse is at Wanatah for next year, with friendly intentions towards the schools.

Elias Boltz, formerly of Ridgeville College, has been elected principal of the Mishawaka schools.

W. H. Sims, last year of Cambridge City, is superintendent of the schools at Brownstown next year.

R. S. Moore is principal of the township graded school at Houston. He pronounces such schools a success.

W. B. Mundell succeeds I. N. Gustin, at Metamora, and H. N. Crecraft stays in the Brookville high school.

Morgan Caraway, last year of Portland, will succeed Jas. Baldwin at Huntington as superintendent; salary \$1300.

W. H. Fertich, superintendent of the Mishawaka schools, has been elected superintendent of the Shelbyville schools.

Prof. V. A. Pinkley had charge of the elocution in the Normal Department at the late session of Island Park Assembly.

Mary Ingersoll and Mary Colgan have both been promoted to the office of supervising principals in the Indianapolis schools.

W. M. Craig has been re-elected at Rockville. This will make his tenth year as superintendent of the schools at this place.

Jas. A. C. Dobson, ex-supt. of Hendricks county, is now editor of and owns one-half interest in the paper called *Danville Progress*.

Supt. J. A. Wood has been elected for his seventh year at Salem, with increased salary. He declined two positions out west at \$1200 each.

O. J. Craig has resigned the superintendency of the Sullivan schools to take the principalship of Purdue Academy, at a salary of \$1500.

Henry George, Jr., of Leavenworth, takes the principal place at Laurel, to succeed A. W. Beighle, who withdraws from the profession to farm.

Miss Calla Harrison, the first and only graduate of Hanover College, has been chosen principal of the Salem high school in place of Prof. Bridgman, resigned.

James C. Black, a graduate of the State Normal, who has for the past two years been head teacher in the Blind Asylum, Indianapolis, has been elected superintendent of the Sullivan schools.

Hiram Hadley, well known throughout the state as an active and thorough educational man, has connected himself with Granger's Business College. The Journal congratulates Mr. Granger on this valuable acquisition.

Laura Donnan, a graduate of Michigan University; Anna W. Platter, a graduate of Wesleyan University, Vt.; and Wilbur V. Brown, a graduate of Stevens Institute of Technology, have been added to the faculty of the Indianapolis high school.

J. P. Naylor, of Columbus, O., has been appointed head teacher in the science department of the Indianapolis high school, to fill the vacancy occasioned by the resignation of Jabez Montgomery, who accepts a professorship in Kalamazoo College, Mich.

A. W. Clancy, late superintendent of the Delaware county schools, has accepted the agency, in this state, for the introduction of the school books of A. S. Barnes & Co. Mr. Clancy is an active, energetic man, and will doubtless do good service. The House is to be congratulated on securing his services.

W. H. Reagan, ex-State Senator, has been elected Superintendent of the Experimental Department of the agricultural work in Purdue University. Mr. Reagan is secretary of the Mississippi Valley Horticultural Society, and has for years past been one of the trustees of Purdue. No better selection could have been made.

POPULAR SCIENCE.

This department is conducted by Prof. A. W. Brayton, of the Indianapolis High School.

PHYSIOLOGICAL.

The deceased poet, Dante Gabriel Rossetti, was a victim of chloral, which he took for sleeplessness, with the inevitable result. About 1868 he was attacked with insomnia, which rendered him crabbed and morose, although normally generous and sympathetic.

Although discovered to be an anæsthetic by Liebreich less than twenty years since (1868), chloral takes rank with opium as a dangerous drug. Chloral is a colorless, oily liquid, having a penetrating odor, sp. gr. 1.5, and the formula C_2HCl_3O . Mixed with water it takes up one molecule and becomes a solid white crystalline substance, popularly known as "chloral," or "chloral hydrate," $C_2H_4Cl_2O$. It dissolves readily in water, alcohol, ether, and oils. An ordinary solution used as a remedy is fifteen grains to a teaspoonful of water. This amount produces refreshing sleep in many cases, which is calm, dreamless, and apparently natural, and as a rule with no unpleasant after effects, as headache, faintness, nausea, loss of appetite, and the constipation so common after the use of morphia. It is hypnotic rather than anæsthetic. It is an agent of uncertain power. One person will require but 10 grains and another 60. Large doses produce death by suspending the action of the brain and paralysis of the respiratory and cardiac centers and nerves.

The habit grows on one as with opium. De Quincy took laudanum equal to 300 grains of opium to get the effect produced primarily by five grains of opium. So with chloral. Victims of this habit use as high as 200 grains daily. Chloral hydrate affects the voluntary muscles first through the motor nerves. The patient can not sit up or walk, while the involuntary muscles, as of the lungs, heart, etc., under the control of the sympathetic system, are not affected except by large doses. It is a dangerous drug, and as with opium should not be taken except with medical counsel.

Chloral may be made by passing a stream of dry chlorine gas into alcohol. 100 grains of dry chloral hydrate distilled in a long-necked retort should yield 70 grains of chloroform. Thirty grains of slacked lime and an ounce of water is first mixed in the retort with the chloral. Liebreich observed that when chloral is mixed with an alkali, as common soda or slaked lime, that chloroform and formic acid are formed. He concluded that the alkalies of the blood would also split up chloral into chloroform and formic acid, and so was led to advise its use as a hypnotic and anæsthetic. This discovery of the

power of chloral was so quickly spread over Europe and the United States that the drug became a common remedy in less than five years, and in less than ten years physicians were called upon to treat patients for the "chloral habit"—a new vice added to those of civilization, due to the abuse of a remedy the discovery of which almost parallels in beneficence to the race that of the use of ether by Morton of Boston in 1848, or of chloroform by Sir James Simpson of Edinburgh the year following.

COUNTY INSTITUTES.

FLOYD COUNTY.—The Floyd County Institute convened in New Albany, at the De Pauw College, August 13th. As a result of Supt. Chas. R. McBride's energy, the institute was the largest and most successful ever held in the county. The enrollment the first day was 85, increased during the week to 153. Average daily attendance for the week, 122. Instructors, D. E. Hunter, of Washington; Mrs. Emma. Mont McRae, of Marion, and State Supt. John W. Holcombe. Our home workers were J. B. James, D. M. Geeting, J. B. Starr, B. F. Maxwell, and Chas. F. Coffin. The following, among other resolutions, were adopted by the institute:

Resolved, 1. That by general consent of the teachers of Floyd county, each teacher pay (voluntarily) over into the fund appropriated for institute purposes, the sum of fifty cents, to be paid some time during the ensuing year. 2. That as teachers we are in sympathy with the tendency to elevate the standard of teaching, and that we endorse the growing sentiment that no teacher should be employed who has not made some special preparation for the work. 3. That Supt. Chas. R. McBride, by reason of both his courtesy and ability, deserves and shall have our hearty support in the work he has so well begun.

E. B. WALKER, Secretary.
MARY CAMP, Ass't Sec'y.

CLARK COUNTY.—The nineteenth session of the Clark County Teachers' Institute was held in Charlestown, August 13th. It was conceded by all to be one of the best ever held in Clark county. The enrollment reached 145, larger than ever before. J. H. Brown and Miss A. Kate Huron were present all week, and did effective work. J. E. Mannix, one of the home workers, presented the subject of English Literature. This was a novel feature of county institute work, and was well received. J. M. Stallsworth was also one of the principal workers. J. W. Holcombe was present one day, and made many friends among the teachers. The institute was conducted by Clark's new superintendent, J. P. Carr, and the esteem in which he is held, and the success with which he is meeting, is indicated by a resolution strongly endorsing him.

F. O. HESTER, Sec'y.

BOOK TABLE.

Harper Publications. The various periodicals published by the Harper Bros. of New York, lose none of their merit as they increase in years. The September Monthly, whose advent always precedes the other magazines, is fully equal in merit to any of its predecessors. A fine illustration of "Night's Plutonian Shore," from The Raven, by Gustave Dore, forms a frontispiece. The usual variety may be found between the covers. A paper on New York Architecture, handsomely illustrated, by Montgomery Schuyler, forms a notable feature of this number. Rebecca Harding Davis has a story entitled, "The Silhouette," which will recommend the September issue to her many admirers. "The Catskills" is the title of an illustrated sketch by Lucy C. Lillie. The Editor's Drawer is not below the standard, while in the department devoted to recent literature one will find profitable notices of many of the new books.

Harpers' Weekly is, as it has been for years, the best illustrated weekly in the world; while the Bazar is a standard for directions and hints on styles of dress in the world of fashion.

Shakespeare Examinations. By W. T. Thom, Professor of English Literature in Hollins Institute, Va. Boston: Ginn, Heath & Co.

The title of this book is no tell-tale. Few will guess its contents without a broader hint than the name gives. Two young ladies who had received their training at Hollins Institute, Va., competed for the prize offered by the New Shakespeare Society of England. The questions were prepared by H. H. Furness, of Philadelphia, and are upon the play of Hamlet. These questions are very exhaustive and cover the history, grammar, meaning of the words, and literary merit and beauties of the composition. Answers to these questions by the two competing ladies form the main part of the book. An examination of Macbeth by a third young lady, which won a prize, is quite a valuable contribution to Shakespearean literature. The book closes with some directions on the class-room study of Shakespeare, by Prof. Thom, who seems capable of giving valuable directions in this department. A careful study of these directions can not fail to be of great service to every student of literature.

Mental Science and Methods of Mental Culture. By Edward Brooks, Principal of the State Normal School, Millersville, Pa., is a book of more than ordinary merit. Not professing originality as to the facts of mind which it presents, for which there is little opportunity since the extensive and faithful researches of Dr. Porter, Pres. McCosh, and others, it is nevertheless somewhat original in its arrangement, and in its adaptation to become a text-book in educa-

tional work. Its illustrations are largely drawn from educational subjects, and have an added value to the teacher for that reason. The application of the facts and principles of mental science directly to the work of instruction and culture, is a marked and important feature of the work. A fuller treatment than is common, has been given to the sensibilities and the will, and this feature renders the work particularly valuable to teachers. The style is clear and forcible, and the book as a whole, fitted for normal schools.

Hand-Book of Mythology. By S. A. Edwards, Teacher of Mythology in the Girls' Normal School, Phila. Philadelphia: Eldredge & Brother.

The importance of the knowledge of mythology and the great loss felt by the reader who fails to understand the many allusions to heathen gods that occur in modern literature are generally acknowledged. To assist the student in art and literature to interpret and understand these allusions, this little book has been prepared.

Grecian mythology, which is the branch of the subject usually meant when the general term mythology is used, occupies most of the book. Egyptian, Assyrian, Persian, Hindoo, Scandinavian mythology are all treated in turn, while the last chapter is devoted to American mythology, a collection of the legends and beliefs held by the Algonquins and Iroquois tribes of Indians. Its compact form and comparatively low price will bring it within the reach of all.

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INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

OCTOBER, 1883.

No. 10.

R ECENT CRITICISMS ON THE PUBLIC SCHOOLS. BY W. A. BELL.

[Continued from August issue.]

5. *It is charged that the schools educate many children out of their sphere.* Time forbids a discussion of the high school question here, except as to this one phase. Is it true, or is it not true that education unfits for the humbler walks of life?

The fact must be recognized that the great bulk of humanity always have been compelled to earn their living by manual labor. This is true to-day and will always remain true, and any system of education that does not recognize this fact and provide for it, is defective. It must be admitted that in too many instances the criticism is just. Boys and girls are urged to study, and urged to complete the high school course, and urged to complete the college course, in order that they may earn their living without work. They are led to believe that if they will complete their education, then by some "hocus pocus and legerdemain" an easy place will open to them, and that they will be sure of position and success. Who has not heard some superintendent or trustee or prominent patron or dignified minister, in addressing a school, make use of language something like the following:

"The boys and girls of to-day will soon be men and women. They will soon be called upon to fill the places of their fathers

and mothers. Doubtless, there are boys before me who will in a few years be lawyers, and doctors, and judges, and legislators, and congressmen; and who knows but that I am now addressing a future Governor of Indiana—or it may be a future President of the United States. Just as strange things *have* happened," etc.

With such false ideas repeatedly set before them, is it any wonder young people go out into the world with wrong impressions of the real objects of education, and with expectations that can never be realized; and is it any wonder that the result is often sad, disappointed, soured lives? This much admitted, I wish to assert that neither the teacher nor the school is responsible wholly or chiefly for the bad results. It is an all-pervasive, *false* public sentiment, that does most of the mischief. Public opinion says that manual labor is, in a sense, degrading, and the schools are used as a means to escape it. Education, of itself, never unfits for labor. The best educated nations are universally the most industrious nations. The most cultivated communities are uniformly the most industrious communities. Tramps are, almost without exception, illiterate. Let the dignity of labor, the true objects of an education, and the high ideals of life, be properly taught, and education, however extended, can result only in *good*. We can not educate for particular spheres, since persons, in this country, persistently refuse to remain in the spheres in which they were born.

6. That the teachers and schools of to-day are inferior to the teachers and schools of 25 or 30 years ago, is a criticism that is sometimes made, and expresses a sentiment by no means uncommon. There is always great difficulty in comparing "ye olden time" with the present, for the reason that there is no common standard of measurement.

The mind of the boy or girl with its limited grasp and limited observation, its vivacity, its buoyancy, and its imagination, is the "yard-stick" with which the one is measured; while the mind of the matured man, it may be the mind of the old man, with its years of experience, with its critical training, with its

almost universal disposition to magnify the old and disparage the new, is the "one-foot rule" with which the other is measured.

A wise and beneficent Heavenly Father has so created us that as events recede from us their unpleasant or disagreeable features grow dim, if they do not entirely disappear, and we remember only the pleasant phases—such as impressed themselves most strongly upon us. It is due to this "bent of mind" that persons are constantly saying, "People are not as honest as they formerly were;" "The religion of to-day is a sad commentary upon the religion of our fathers;" "We have no statesmen to-day that will compare with Patrick Henry, Clay, Webster," etc.; "The world seems going to the bad;" "O, that the unalloyed, uninterrupted pleasures of my childhood days might return!" These are all proofs that distance lends enchantment.

In comparing the past with the present, the tendency is to select from the past, those few strong characters who impressed themselves upon their times, leaving out of the estimate their hundreds or it may be their thousands of associates, who have disappeared from mind and from history, and then comparing these few "*bright particular stars*" with the masses of the present. It is only by this unfair method of comparison, that the religion, the statesmanship, the honesty, the intelligence, the teachers, the schools of the past, can be made to outrank or even equal those of the present.

I am one of those who believe firmly and unreservedly in the advancement of the world.

That the average intelligence of the teachers of to-day is 100 per cent. higher than that of the teachers of 25 years ago, is beyond dispute among those who are familiar with the facts. Did time permit, I should like to compare some of the examinations of the past with those of the present. Public sentiment and the demands of the times, have made the schools of to-day *different* from those of the past. It is not the work of the teacher. The steamboat, the railroad, the telegraph, the newspaper, the daily new inventions and discoveries, have made a new world.

The flood of light thrown upon civilization by these instrumentalities can not be excluded from the school-room.

The course of study must be made *broad*, even at the sacrifice of *depth*. The schools of to-day are what the times have made them. There is no such thing as going back to old forms and old methods. The average school of 30 years ago, would not be tolerated in any average community of to-day. There can be no radical, sudden change, no revolution. The schools are not perfect, no one claims that they are—neither is the church, the government, the family, nor any social institution; but they are doing a great work, next to the family the greatest work of civilized society.

They do not ask exemption from criticism; they ought to be criticised. Criticisms are an indispensable means of improvement.

Sweeping denunciations, such as are sometimes made, are alike unjust and unwarranted, and serve only to show the ignorance and narrowness of the author.

Teachers have a right to ask that persons who offer criticisms take pains to carefully inform themselves as to the facts, and that they be specific and not general in their charges. An argument based upon false data, invariably leads to an erroneous conclusion.

It is always unjust to condemn a system because of the failure or blunders of an individual.

A full, fair, unprejudiced discussion of the school question in all its phases can do the schools no harm, and must, in the end, result in good. The schools belong to the people, not to the teachers, except as *they* are part of the people, and as such they are subject to criticism and modifications by the people. Teachers should heed these criticisms and profit by them.

WHO WAS THE MAN WITH THE IRON MASK?

THE man with the iron mask was a state prisoner of France during the reign of Louis XIV. He was admitted to the bastille September 18, 1698, and died there on November 19, 1703, and was buried in St. Paul Cemetery, under the name of Machioti.

During his stay in the prison he wore a black velvet mask, which he was forbidden to remove on pain of instant death. Saint-Mars, governor of the bastille, attended him at meals and at toilet; all articles of clothing worn by him were examined or destroyed by Saint-Mars, lest by some mark he should make himself known. If at mass, even, he attempted to speak or show himself, the invalides guarding him had orders to shoot him dead. Notwithstanding the severity of confinement, he was treated with all the kindness that could possibly be shown to a prisoner.

But what was his name? This is not definitely known. There are many theories, but two of which are credible, and one of these is certainly improbable. We will give the probable one, and refer the reader to Vol. IX. of Appleton's *Encyclopædia* for the other.

The prisoner was Ercole Mattioli, a minister of Charles III, Duke of Mantua. Mattioli entered into an intrigue with Louis XIV, by which for money he was to use his influence to induce the duke to give up the fortress of Casale to Louis. By obtaining this all Lombardy was at the mercy of France.

Louis suspected soon that Mattioli was playing false; so he lured him to the French frontier and had him secretly arrested and imprisoned.

As he was a minister plenipotentiary his arrest was a gross violation of international law, which could be easier and more safely denied than justified. When once France made the denial her honor was at stake to maintain it. So the prisoner was not only strictly guarded and closely confined, but his face was covered with a mask.

This mask, from its appearance, was called iron; but it was only heavy black velvet, fastened with steel springs.

THE GENIUS OF HARD WORK.—It is not genius that tells on the world, but downright and honest hard work. Your brains may ferment and effervesce like a yeast-pot, but unless you can settle down to steady toil you are worth no more to the community than a soap-bubble, which bursts so soon that it is hardly worth one's while to stop to look at and admire it. A blacksmith is worth a dozen geniuses who wear long hair and wonder why they are not admired.

***FUNCTIONS OF THE PREPARATORY SCHOOL.**

W. H. VENABLE.

✓ THE preparatory school, because it *is* preparatory, holds a position of peculiar trust among educational institutions. No one loses the impress made upon him, the impulse given him, by the first schooling he receives.

What is the main purpose of education? What the essential duty of the teacher? To develop mind, brain power, mental and moral force. This development is effected not merely by accumulating knowledge, as one puts gold in bank, but also by training the powers of thought and feeling, by arousing the faculties to original action and conscious achievement. The subjects taught are of a value proportioned to their good effect on the mind. Lessons, like food, are taken for their nourishing quality. They must enter into the intellectual circulation. Not the studies, but the study educates. 'Tis labor lost to pack facts into the brain if there they serve no other use than when in books. Memory, to be sure, is important, but not so important as recollection, comparison, reason. Your pupil is fitted for college when he knows how to answer the entrance examination questions, and besides this, knows how to think, how to listen, how to learn, how to co-operate with books and teachers, and how, in some degree to direct his own course. For, as Quintillian says, "Why do we teach pupils, but that they may not always require to be taught?" Much is it desired that some plan be devised by which competitive examinations shall test the powers as well as the possessions of mind. None know better than college professors how important it is that the freshmen start with right habits, motives, and aspirations. Some educators make a strange distinction between fitting for college and fitting for life, as if college were not life, or as if the one fitting were incompatible with the other. Better not fit for college at all if that fitting unfits for life, present or prospective. Do the most for your pupil to-day, and he will have the best possible preparation for to-morrow. Each

*Delivered at the commencement exercises of Chickering Institute, Cincinnati, June 8, 1883.

day's mental growth should be a beautiful conclusion to all preceding growths and a hopeful beginning to all following.

The cramming system, fostered, I fear, as much by the colleges as by the lower schools, is opposed to every axiom of pedagogics, and earnest teachers everywhere protest against it. In Strasburg, a method prevails of compelling geese to eat in order to increase enormously the size of their liver, for use as *pates de foies gras*—*fat liver pies*. The unhappy goose is shut up in a box barely large enough to hold him, and is crammed with food several times a day; his bill is forced open and the pabulum is poked down his throat with the finger. Alas for the poor goose, or gosling, who is crammed with indigestible knowledge, be it science, mathematics, or classics; whose memory grows prodigious at the expense of health, reason, wit, fancy, feeling, taste, manners, and conscience. I do not fancy the goose-liver method of education, either in the primary school or in the university.

This process of cramming is part of the complicated operation known as machine education, so much but not enough criticised and condemned. The terrible "machine," though found in the most mischievous perfection in large public schools, whence it is difficult to remove it, is set up also in many private schools, where there is no excuse for tolerating it. Teachers are not so much to blame for the existence of the "machine" as are the people, too many of whom, though theoretically opposed to it, practically regard it as a useful and necessary part of school apparatus, and, unless they see the usual forms, papers, reports, per cents, text books, and external routine in general, are apt to take alarm and suspect something visionary. Too often the friends of better education are like the temperance man in Maine, who was in favor of the prohibition law but opposed to its enforcement. Reforms go forward but slowly when not encouraged by public sentiment. Nevertheless, as a German philosopher says: "To elevate above the spirit of the age, must be regarded as the end of education." We must pursue in patience the path of our feet.

Education should proceed with free steps along a broad way. Learners, properly instructed, take an active, happy interest in

their work. The only thoroughness possible proceeds from willing effort. The boy who does not care for his own progress does not advance. You *can not* teach a pupil what he *will not* learn. A humble mood is the first requisite of the student. Only the docile have discovered the secret of power. Obedience is victory. The demands of a good school are rigorous and exacting. True are the words of Joubert: "Education should be tender and severe, and not cold and soft." Youth needs guidance; no greater evil can befall a boy than to be left to do as he pleases. The duties that a preparatory school prescribes are imperative, and should be done with scrupulous integrity. Let no one hope to reap the sheaf of scholarship except with the sickle of toil.

One of the functions of a preparatory school is to discover and respect the individuality of pupils. We can not fashion all characters in the same way, and if we could, we should not. We defy nature when we force John to be James, or either of them to imitate ourself. You must be you; he, he; I, I. Nature fixes that; education must accept nature's condition. Yet children can not know themselves or their own bent; teachers must discover the natural tendency, and act from a knowledge of it. Diversity in disposition does not necessarily call for great difference in treatment. A beginner in learning can not be a correct judge of what he ought to study or not to study. The young are almost certain to mistake their "wishes for capacities."

Finally, the preparatory school must take time and pains to cultivate goodness, courtesy, and delicacy in pupils. Every class should be a class in conduct, though no precepts need be announced. Every relation of teacher and learner should induce in both, gentle and gracious behavior, self-respect, dignity, and sense of honor. The greatest value of any education is its moral value. The schools are the foremost promoters of civilization. They should illustrate the best habits of the best society.

In a word, the ideal duty of the educator is to make the best of his pupils by preventing all perversions, and assisting all normal faculties to attain their true functions. Beautiful and inspiring is that sentence of a wise French thinker: "Man might be

so educated that all his prepossessions would be truths, and all his feelings virtues." Sacred is the task of the teacher; let us approach it with reverence, and discharge it with religious fidelity.

PRIMARY DEPARTMENT.

[This Department is conducted by LEWIS H. JONES, Prin. Indianapolis Training School.]

PRIMARY ARITHMETIC.

SUBTRACTION.

WHEN a figure in any place in the subtrahend represents a less number of units of the corresponding order than does the figure in the same place in the minuend, the one difficult point of subtraction occurs, and the great advantage of having pupils understand thoroughly the decimal scale with the relative values of the units of the different orders, is seen most conspicuously. Let the problem be somewhat as follows: From 421 take 245. Place the problem, as in the margin, on a blackboard that can be placed flat on the floor in front of the class,—placing the minuend far enough away from the subtrahend to allow of the mode of illustration hereinafter explained. Suppose the blackboard in question to be placed between the teacher and pupils in such way that the figures are right side up for the pupils, with subtrahend nearest them. Now place one stick (cigar-lighter, tooth-pick, or whatever may be used for illustration) just above the figure one in the unit's place in the minuend, (i. e., *beyond*, from the pupils, next the teacher), or still better, if the figures are made larger, so that the sticks will not obscure their view, place the one stick directly upon the figure one in the minuend. In like manner place two bundles, of ten sticks each, upon the figure two of the minuend, and four bundles of one hundred each, every hundred being composed of ten bundles of ten each, with a separate rubber binding them into one hundred.

Now study the problem with the children in the light of the true nature of a subtraction problem. By examining the figure in units' place in the subtrahend it will be seen that one requirement of the problem is to remove five of the sticks of the minuend. Looking now to the minuend it will be seen that only one stick is represented in units' place, and really only one stick is left alone in the minuend; but many more are bound up in the bundles of tens at the left. Take one of these bundles, remove the rubber, and place them loosely with the one stick. Write in small figures the result, eleven, above the large figure one. Now remove the five of these sticks indicated by the figure five of the subtrahend, and have pupils count the remainder, and write the figure six in its proper place. Now place the five sticks removed, upon the figure five in the subtrahend, and the six sticks upon the figure six in the remainder. This will show the real relation of the minuend, subtrahend, and remainder in a subtraction problem, and emphasize the fact that subtrahend and remainder are always parts of the minuend, and also why the remainder and subtrahend, when added, exactly equal the minuend,—an important suggestion in the verification of answers.

Now examine the figure two in the minuend, and find that two tens are indicated, but on examining the sticks only one bundle can be found. The other bundle was used in units' place. Write small figure one above the figure two in tens' place. Study the requirement as indicated by the figure in tens' place in the subtrahend. Four tens are to be removed. Take one of the hundreds, remove the outside rubber, and spread the ten bundles with the one there before. Place eleven in small figures above the small figure one which was placed above the original figure two of that place. Remove the four bundles required by the subtrahend, and place the sticks as indicated for units.

Examine the hundreds of the minuend. Four hundreds are represented in hundreds' place. Only three can be found. The other was used as tens. Place a small figure three above the original figure four of the hundreds' place; remove the two hundreds required by the subtrahend, and place the bundles of hundreds in their appropriate places in subtrahend and remainder.

$\begin{array}{r} 11 \\ 421 \\ 245 \end{array}$ The whole arrangement (except that of the sticks, which can not be so well shown on paper) as finally completed would be indicated, as in the margin. Leave off the 176 sticks soon, only representing the changes; then omit to represent the changes, but only talk of them; then subtract, only giving results. Leave the rapid drill for the third epoch.

Finally, test pupils on such problems as follows: "Johnnie has six apples, and Jimmie four pears; how many more apples has Johnnie than Jimmie has pears?" Which is the real subtrahend, the four pears of Jimmie, or four of Johnnie's six apples? Show the real use of the "four pears" of the problem; viz., to show how many of the apples to remove.

Again, "A farmer has thirty-five sheep in one field and twenty-five in another field; how many more sheep has he in the first field than in the other?" Which is the real subtrahend, the twenty-five sheep in the second field, or twenty-five of those in the first field?

SCHOOL ORGANIZATION.

IN the establishing of the elementary relations between teacher and pupil which constitute the great fact of organization in school, viz., *common purposes, common aspirations, common efforts, and common sympathies*—there are certain well-marked phases or steps, each of which admits of definite study and successful practice. The following are some of the most important of them:

a. The pupil must form a feeling of respect for the teacher as a person. The growth of this feeling of respect is absolutely necessary in order that whatever purposes are explained by the teacher be at once accepted, and thus become *common* to teacher and pupils—for it is noticeable that with young children all worthy purposes in education must originate with the teacher and be *accepted* by the pupil. Further, common aspirations can only spring up when common purposes have been fully accepted; common efforts commence only when common purposes have excited intense common aspirations; and certainly, common sympathies arise only in the presence of thorough respect.

This statement of the case from the side of the pupil enables us to restate it with great effect from the side of the teacher. If the pupil is to have a respect for the teacher, the latter must *possess and exhibit in the treatment of pupils* positive worth of character. Children are instinctive readers of character. They never fail to respect the presence of candor, truthfulness, delicacy, and real politeness. The teacher who treats his pupil as a human being, who will sometime (when he is developed) be his equal in every way, naturally receives in return that deference which is the first stage of growth of the feeling of respect. The constant exhibition of real worth of character completes the growth.

b. The pupil must have developed in him a respect for the teacher's scholarship. Children are excusable for being ignorant of many things which it would be positively disgraceful for older persons not to know. But the teacher, by the very idea of his vocation, is expected to be scholarly, and children easily detect the absence of learning in the teacher, and thoroughly despise him for the false professions he has made by the terms of his contract. On the other hand, liberal intelligence and profound scholarship make impressions for good on children who are too young to demand them in direct instruction.

c. The pupil must come to respect the professional qualifications of the teacher. Respect is very quickly developed in a child toward one who proves himself well qualified for his business. The teacher has by the acceptance of position in the school-room professed a certain definite knowledge of how to administer the affairs of the school. The presence or absence of this necessary qualification on the part of the teacher is quickly detected by the pupil, and a feeling of respect or of disrespect is immediately generated. This condition of affairs is never more critical than at the beginning of the organization of a school by a teacher who is a stranger to the pupils. The teacher's acquaintance with school affairs, and his consequent self-possession in the new position will be shown by his every move; or his manifest lack of the necessary knowledge and training will bring him into rapidly growing disrepute.

Even in so simple a matter as the seating of pupils on the first

day of school, or on the immediately subsequent days, if the teacher allow mischievous friends to sit near each other they will soon commence to doubt the professional ability of the teacher who will allow such conditions for trouble to continue; while other pupils, looking on will think that the teacher is slow, or wanting in the capacity to read character quickly. In a short time a disrespect for the teacher is engendered which it will be difficult to eradicate.

Again, if the teacher be slow in assigning work to her class, or assign inappropriate work, pupils perceive a lack of professional familiarity with what is to be expected in school work, and at once mentally decide that the teacher is illy qualified.

All this psychical relation of pupil toward teacher is changed to thorough respect when the latter assigns at once appropriate work for all, seats each one appropriately, decides school questions promptly, and shows familiarity with each detail as it arises. Let this direction of events be supplemented by skillful and interesting teaching, and the whole question of the mental attitude of the pupil toward the teacher is successfully solved. The condition for such success in organizing a school is *thorough professional study of school work*.

d. The pupil must believe the teacher thoroughly honest. The teacher who has a dishonest element in her character will certainly have such defect laid bare by the quick observation and the ready inference of the children.

e. The pupil must believe in the impartiality of the teacher's administration. Impartiality does not imply that each child should be treated precisely as the others are treated, but that each child should be treated appropriately.

f. The pupil must be made to feel a *school patriotism*. This may be developed in many ways. Honest pride in the achievement of a class as a whole, references to the good name of the school as a whole, the adoption of a few exercises, as of singing, marching, gymnastic exercises, reading occasionally in concert, etc., etc., are so many simple means of creating the *esprit de corps* so necessary to the completion of organization among the members of the school. It is on this principle that some schools find

it profitable to have uniforms for pupils, to have military drills, introducing something of the "pomp and circumstance of glorious war" into their otherwise sober routine. United States district telegraph messenger boys feel a greater self-respect, and a larger sense of their responsibilities when wearing the uniform and the distinguishing badge of their company.

Napoleon found the drivers of his wagon trains a dissolute band, causing confusion to his army in every difficult movement. By the introduction of the uniform, daily drill and review, and honorable mention in public reports, they were soon transformed into an orderly, trustworthy, and effective branch of the army service.

APPROPRIATE USE OF WORDS.

THE writer of an article in this department of the August Journal, speaks of the terms units, tens, thousands, etc., as useless lumber, giving as one of the reasons for believing them useless the fact that after a brief use in the first part of written Arithmetic they disappear forever. There is in this statement and its reason, a possible mistake as to the real use of terms,—in fact of the relation of language to thought.

Let us examine the matter a little. The intelligent use of words in original discourse implies the combination with new sentences of ideas that have been acquired in a variety of ways and at different times. In order that the combination of ideas be correct and valuable, the ideas themselves must be accurate and finished before they enter into the combination. These terms referred to express some of the most definite ideas with which it is possible to make a child acquainted. Here then is a conspicuous example of the exact application of a word to a definite idea,—to a real, finished *concept*; and the mathematical are almost the only concepts which the child *finishes* in his early years. Such careful, honest application of words must do much to cultivate clearness and accuracy in the child's use of language, and indeed cultivates to a considerable degree the almost lost art of having a definite thing to say, and of saying precisely that thing.

Again, profitable teaching of primary number, as well as of other subjects, requires appropriate conversation between pupils and teacher, by means of which the teacher can stimulate thought and test results. This work, whether in the questioning of the teacher or in the assigning by her of exercises by which the pupil gains facility or shows the extent of his knowledge, implies the definite use of terms in order that there shall be no obstruction to a free interchange of thought and sympathy between the teacher and her pupils.

Neither is the fact that these terms disappear after a few weeks of appropriate use any argument against their use while they are of service. The immediate use of an appropriate word as the sign of an idea is often with a child the only means of retaining the idea itself; and instead of entailing additional labor upon him it is in perfect accord with the way in which his mind naturally wishes to work, and is therefore a relief.

The ideas referred to in the beginning of this article, and which are named by the terms there mentioned, are themselves the elements of still more complicated concepts, which the pupil makes, with more or less definiteness as he proceeds with his arithmetical studies. As these elements are worked over into others, the name of each element is seldom necessary, that of the new concept being the one now needed, and so on throughout his mathematical course. The terms should disappear forever, as rapidly as the higher concepts take the place of the lower. This is more conspicuously the case in mathematical studies than in any others.

ILLITERACY IN THE SOUTH.—The illiteracy of the colored race at the South is at least attracting attention. In Mississippi it is 45 per cent., in Maryland 59 per cent., and so on up to Georgia, where it is 80 per cent. Georgia, Alabama, Louisiana, and South Carolina contain the most illiteracy. Whatever the general government may do for the white people of the South, it should be liberal with the blacks; it should sustain schools for the black children.

DEPARTMENT OF PEDAGOGY.

This Department is conducted by GAO. P. BROWN, President State Normal School.

QUESTIONING.

IN the last number of the Journal an example of the Socratic method of questioning was given. The evident purpose of Socrates in that instance was not to instruct, but to prepare the mind of his pupil for instruction, by making him painfully conscious of his ignorance. By his method he dropped a sounding line into the knowledge of his interlocutor and demonstrated to him its shallowness.

Among the purposes the teacher may have in view in questioning, are the following, viz. :

1. His design may be to test the pupil's knowledge. His purpose in this may be two-fold :
 - a. He may wish to show the pupil how much knowledge he has, and thus encourage him by an inventory of his actual possessions. This is helpful in certain states of humiliation and discouragement.
 - b. He may wish to lay bare his ignorance, and thus reduce him from a state of pride and self-conceit, arising from a false estimate of his knowledge, to that degree of humiliation which shall be favorable to the receiving of instruction that he needs.
2. Another design may be to train the mind in processes of thinking. This requires that all questions should follow the order of logical sequence, so that the necessary or scientific relations of the ideas shall be observed. A questioning for facts that hold no discernable relation to each other may exercise the memory or recollection, but gives no exercise of the thought power.
3. Another design of the questioner may be to instruct. To realize this purpose he must follow the order of dependence of the ideas, and must question for those ideas already in the mind of the learner that bear the closest relation to the unknown idea which it is the aim to lead the pupil to acquire. It is natural for the mind to leap from a known to a kindred unknown idea,

and it will do this the more readily when it is familiar with a great number of related ideas of the group of which the idea sought is one. To illustrate:—The mind must be familiar with a large number of ideas of the group called “arithmetical ideas” in order that it shall pass on to a new one by the mere suggestion of an idea already in the mind. But the more of those ideas it possesses, and the more it has been exercised in the study of their logical dependence, one upon the other, the more readily will it discover a new idea of this group. The skillful teacher by questioning for the ideas already in the mind of the pupil will so marshal them that they will suggest the new idea which the pupil needs to know, without its being told to him. Such questions may be called *instructive* because the purpose of them is to lead the pupil to acquire new information. But they are at the same time disciplinary.

There is a great abuse of the method of instruction by questioning which has probably arisen from disregard of the caution suggested above. These “development questions” are relied upon for instruction in every stage of the pupil’s advancement. An effort is made to lead him to discover every new idea in this way. The teacher becomes a bond-slave to what has been falsely styled a “Pestalozzian principle”; viz, “Never tell the child what he can be led to discover for himself.”

In bondage to this supposed principle the conscientious teacher consumes hours, days, yes, probably months of time in tedious, toilsome questioning to no purpose. The pupil has not a sufficient number of facts belonging to the group which he is studying, nor a sufficient familiarity with their relations, to enable him to discover the new fact which he needs to know. So, instead of thinking of the ideas by which the teacher is trying to lead him up to the new knowledge, he is trying to find out what the teacher is thinking about, and is engaged in guessing what he is wanted to say from the form of question or the intonation of the voice of the teacher. When, finally, he has guessed it, or more often, has been told it in a round-about way, the teacher congratulates himself on his success, and rushes on to make another attack with renewed zeal.

Instructive questioning is good so long as the teacher is master of it; but when he allows that or any other method to master him it becomes an evil. The fact that should ever be kept in mind is that the pupil must possess a certain basis of ideas belonging to the subject taught before he can be led readily by questions to discover new ideas, and that much of this basal knowledge must be given by telling it to him.

The characteristics of a good question will be the subject of a future paper.

G. P. B.

LEARNING AND REMEMBERING.

IN the August number mention was made of the fundamental processes involved in the acquisition of knowledge. We will now consider some of the physiological conditions of the exercise of this power.

However widely writers upon mental science may differ in regard to the nature of mind, all agree that the energy and effectiveness of all our mental processes are largely dependent upon the character and condition of the brain. The brain is the physical organ of the mind. Scientists teach that every thought, feeling, or act of will is accompanied by a certain expenditure of nervous energy, and a consequent destruction of a certain amount of brain tissue. As muscular action is performed at the expense of muscular tissue, so mental action is performed at the expense of brain tissue. The rapid destruction of brain substance may be inferred from the enormous quantity of blood which flows to the brain to supply material to repair it. This organ, which weighs an average of $49\frac{1}{2}$ ounces in men and 44 ounces in women,—or about one-fiftieth as much as the entire body,—receives one-fifth of the blood of the entire body. This fact indicates the dependence of healthy and vigorous brain activity upon the quantity and nutritive quality of the blood supplied to the brain. It is only when the entire body is in vigorous health that there can be the most effective action of the mind. The brain sympathizes with every other organ and is strong or weak as they are. This is true when brain action is normal. There is an

abnormal condition often experienced in certain states of disease in which there is an unnatural activity of brain even when there is great weakness of the other organs. Also by an undue exercise of the brain, which is long continued, it comes to appropriate more than its share of the blood, and the other organs are thereby weakened to give strength to the brain. But these eventually react upon the brain and a diminution of its power results. It is therefore, only when the body is in perfect health that there can be the most healthful and vigorous action of the mind. The old maxim, "A sound mind in a sound body," is an acknowledgment of the truth of this. The size and quality of the brain are not the same in all individuals. Mental power is dependent upon the size and quality of the organ which it employs to manifest itself, as well as upon the condition of the brain in respect to nutriment and vigor.

These are facts of infinite importance in the education of the child. The peculiar structure of each brain gives mental tendencies and aptitudes which will determine the character of the person, except as they are overcome by education. Some of these are to be stimulated and cultivated by the educator, others are to be repressed.

The healthful or diseased condition of the body will determine the amount of energy which the mind can put forth and the length of time it can sustain it. The brain must be fresh if the mind shall act vigorously. A tired brain will serve only for feeble thinking.

What gives rest to the brain? The only perfect rest is untroubled sleep. There are, however, changes of exercise that afford partial rest. Mr. Bain says that memorizing is an exercise which makes the greatest demands upon the nervous energies; that the use of ideas in the making of new combinations,—in new constructions,—demands a less degree of brain-vigor, and that writing, drawing, and searching reference books for information, and noting what is found, make the least demands upon the nervous power.

This suggests that there are periods of the day that can be

most economically employed for memorizing and other severe intellectual labor, and others for performing the lighter and easier work. The three periods of greatest mental vigor are, (1) in the morning for three or four hours after breakfast; (2) for two or three hours following a period of rest after dinner; and (3) one or two hours following a period of rest after supper. The adult mind will use time most economically if it shall employ its periods of greatest vigor in making new acquisitions, reserving its constructive work for periods of less mental energy, and setting apart all merely mechanical and routine labor for those portions of the day when the mind is least vigorous. With the child, memorizing is easier than construction, since the constructive powers have not yet reached their full development.

Partial rest is experienced by changing from one subject of study to another, provided the point of fatigue has not been reached. After this point has been passed all labor is injurious.

G. P. B.

PRINCIPLES OF TEACHING.

A SCIENCE of teaching must consist of a body of ideas grouped in logical relations under the guidance of larger and more comprehensive truths which are called principles or definitions. The definition of any science is the statement of a truth so large and comprehensive that all of the ideas of the science lie enfolded within it. Every science is implicit in its definition, and is made explicit by an orderly and clear expression of the ideas therein involved. It is our present purpose to state some of the ideas which seem large and comprehensive enough to be called principles of teaching. A discovery and statement of all the principles of teaching must precede any satisfactory formulation of the science. Whether enough facts have been discovered to make it possible to state all of the principles of this science may be doubted, but some of them can be formulated.

The following propositions seem to express truths sufficiently comprehensive and fundamental to entitle them to be named,—

PRINCIPLES OF TEACHING.

1. Mind is self-conscious energy, being both self-active and self-directive.

a. It is distinguished from matter in that matter is thought to be inert.

b. It may be that ultimate analysis will show that what is called matter is but a form of energy, and is therefore in its essence of the nature of mind.

2. Mind is an organism of powers which are developed by the process of *growth*.

a. Every organism is a unity of powers coöperating for the attainment of a common purpose by growth through the acquisition and assimilation of nutriment.

b. The marks of an organism are, therefore, its indivisible (1) *unity*, which makes it an individual, composed of (2) *organs* or *powers*, which (3) *co-operate* to accomplish a (4) *purpose* through (5) *growth* resulting from the (6) *assimilation* of nutriment. Every organism manifests that peculiar form of energy which we call *life*.

3. The process by which the mind grows is by *exercise* in the acquisition and assimilation of proper nutriment.

4. It is a law of mind that in the acquisition of knowledge it (1) apprehends objects of knowledge as wholes, making an *unconscious synthesis* of the parts and elements of which each whole is composed; this knowledge is vague and indistinct until (2) by a *process of analysis* it is made distinct and clear; (3) following this is the comparison of this knowledge with other knowledges, which results in a *larger synthesis* of things by discerning the unity which binds all together.

5. It is a law of mind that, in the acquisition of knowledge, it proceeds from what is known to a nearly related unknown.

6. The mind acquires that knowledge most readily in which it has a present and lively interest.

7. It is a law of mind that it tends to act again more readily in a way similar to that in which it has acted before. This tendency affords an explanation of the existence of both memory and habit.

8. It is a law of mental growth that it is through the acquisition of the concrete and particular that the mind advances to a knowledge of the abstract and general.

9. It is a law of heredity that tendencies, aptitudes and predispositions are transmitted from parent to child.

10. Each mind can put forth at any one time but a limited amount of energy; this may all be concentrated in one act of thought or feeling, or it may be distributed among two or more simultaneous acts or states.

11. It is a condition of vigorous activity of mind that there be a healthful and vigorous state of the brain, and this in turn is dependent upon the health and vigor of the body. A sound mind can be found only in a sound body.

12. "The senses and imagination dominate in the child, making him the creature and often the victim of impulse and caprice; but by the gradual development of reason through reflection the man becomes a law unto himself." (This principle should determine our methods of school government.)

13. Early childhood is the period for observation and the acquisition of a knowledge of facts, while youth and manhood are periods best adapted to reflection and the discovery of principles and laws.

It is our intention to elaborate these principles in succeeding numbers of the Journal.

G. P. B.

ENGLISH GRAMMAR—III.

MODIFIERS.

ALL modifying elements in the sentence express either objects or attributes. It will be necessary, therefore, before treating modifiers, to explain the nature of attributes. The importance of a correct idea of what attributes are, will be seen if we reflect that three great classes of words express attributes—adjectives, adverbs, and all verbs except those that are purely assertive or copulative.

What an attribute is may be apprehended most easily by means of an example, and in contrast with what we call the

parts of an object. For example, suppose an apple to be separated into peel, pulp, seed, and juice. These are parts, not attributes. They occupy different portions of space. They may be placed one on each corner of the teacher's table, or in the four corners of the room, and thus lie entirely separate and distinct from one another. In a sense, these parts may be said to compose the apple.

But the apple is round, red, mellow, and sweet. In a closer and truer sense, these may be said to constitute the apple. These can not be separated in space from one another, nor from the object. They inhere in the object, and make it what we think it to be. They are attributes. Whatever belongs to an object and can not be separated from it in space, is an attribute of that object.

It is evident that objects are distinguished by their attributes. An orange is known from an apple by the difference of their attributes. If it seems, as pupils are inclined at first to think, that they are known to be unlike by the difference of their parts, it would be left to show by what means the parts are themselves distinguished; how we know the peel of the orange from the peel of the apple, the juice of one from that of the other, etc.

The true conception of attributes is fundamental to any scientific classification of the modifying elements of the sentence. As said above, all modifiers may be classed as expressing objects or attributes. If they express objects, they are *substantive* modifiers—nouns or pronouns in their use; if attributes, they are *attributive* modifiers—adjective or adverbial.

Since the subject of a thought must always be an object or something conceived as an object, the sentence subject takes only the substantive and the adjective modifier. To this there are the exceptions, of course, arising from the use of verbal derivatives—infinitives and gerunds—as subjects, which in all their substantive uses retain the modifiers proper to them as verbs. The subject takes two forms of the substantive modifier—the possessive and the appositive.

Adjective modifiers of the subject, as also of nouns in all other uses, are of two classes. In the sentence, Good books are val-

uable, "good" limits the application of "books" to those only that have the attribute denoted by the modifier, excluding from thought those that are not good. The meaning or application of the word is made less. Such adjective modifiers are called limiting or restrictive. In the sentence, The broad Atlantic was crossed, "broad" does not make the application of "Atlantic" less; it only limits the attention more especially to this attribute of the object, to the exclusion of others. Other examples of this species of adjective modification are the following: The *round* earth, the *silvery* moon, *mortal* men, the *tall* pine. No grammatical forms mark this distinction, but it is so necessary to our thinking, and is so clearly recognized and observed in our literature, that it is deemed best to give it.

The modifiers of substantive predicates are the same as those of the subject.

The attributive predicate takes two general classes of modifiers—those that express objects, called Objective, and those that express attributes, called Adverbial. The mark of the first is that it represents an object of the attribute expressed by the principal part of the predicate; of the second, that it represents an attribute of this attribute. In the sentence, He threw the ball violently, the attribute "threw" is doubly limited; first, by the object "ball," which the attribute respects, and second, by the attribute "violently." Each of these renders the attribute "threw" less general.

Of the asserting element of the sentence there is but one general class of modifiers. This is the species of adverbials called modal. They qualify or make less general the relation that is thought to exist between the subject and the predicate. More than a little thought will be required on the part of the average pupil to see the exact nature of the modification expressed by the italicised words in the following: He spoke *positively*. He *positively* spoke. He will *probably* come to-morrow. They are *clearly* of a different opinion. He thinks *clearly*. *Possibly*, he is here.

The subjects briefly presented in this and preceding articles have been given as furnishing a basis for the discussion of some

of the more practical questions in English sentence construction.

W. W. PARSONS.

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READING—I.

MAN is a spirit, manifesting himself through a physical organism. The spirit may manifest itself directly through the body in the expression of the face, the gesture of the hand, the modulations of the voice, or the articulation of words; or indirectly by means of some instrument, as the chisel of the artisan, the pen of the writer, or the instrument of the musician.

In whatever form the spirit manifests itself, that part of the body by means of which the manifestation is effected must be in a condition to perform its function satisfactorily. To play upon the piano the fingers must be made nimble and the wrists elastic. To read orally, the various organs of vocalization and articulation must be so cultivated that they can give a neat, prompt, firm, and easy response to the dictates of mind. "All art," says Goethe, "must be preceded by a certain mechanical expertness."

While mechanical expertness is essential to perfect oral expression, it does not follow that those who possess it in the highest degree are therefore the best oral readers. It often happens that persons whose articulation is quite faulty, and whose voices are weak and unpleasant in quality, are more effective readers than others whose articulation is distinct and whose voices are strong and clear. The latter divorce expression from sentiment, and make a show of mechanical expertness the end of their efforts. They are "the sounding brass and the tinkling cymbal." The louder they sound and the more perfectly they tinkle the less do they manifest the thought and feeling contained in the language which they employ as the pretext of their vocal gymnastics. In the former case reading is a manifestation of spirit, and the spirit within is so strong that it shines out brightly through a very blurred expression. But how much more effective would their efforts be did they possess the two elements,—a condition of spirit worthy of manifestation and a mechanical expertness capable of adequately expressing it. These two are somewhat mutually dependent, the one upon the other, yet one is more fundamental than the other.

In the early unscientific days the drug mixer who relieved a headache, resulting from a disordered stomach, by the external application of a powerful anæsthetic, was called a physician. In modern times he is usually called a "quack." The faults which occur in the reading of children appear to be mechanical, but many of them

are not, and some of them that are can be best eradicated by attending to conditions which, at first, may appear to be remote. Some of the important conditions of good oral reading are the following:

1. *A good composition.* As in order to read at all it is necessary to have something to read, so in order to read well it is necessary to have something to read which is worthy of being read. There is a natural congruity, or agreement, between the thought to be expressed and the expression which appropriately belongs to it. Animated thoughts agree with an animated expression; feeble and spiritless thoughts agree with a feeble and spiritless expression; and good oral expression is inconsistent with thoughts or language which have no power or beauty in themselves. The various series of school Readers now in vogue admirably supply this condition, and furnish the reader with a rational ground of enthusiasm in his work.

2. *Adaptation of the composition, in thought and language, to the experience and literary attainments of the reader.*

If the thought of the composition is so difficult that he can not grasp it; if the incidents it relates are so far removed from his experience that he can not, in imagination, participate in them; if the words are strange and the sentences intricate; however good the composition may be in itself, it fails to stimulate the mental activity of the child, and hence to inspire good expression.

If a profound scholar, whose soul

"Is sicklied o'er with the pale cast of thought,"

contemplated suicide, and wished to impress upon an audience his powers of oral expression just before "shuffling off," he would find the famous soliloquy, "To be or not to be," etc., admirably suited to his purpose. But the average boy of ten years does not understand the thought and language of that composition; he enjoys excellent health and has no notion of killing himself. Yet he is sometimes asked to read that, and other compositions, not less removed from his experience and literary attainments.

The pupil is graded by his reader, and a strong pressure is brought to bear upon the teacher to advance him as rapidly as possible. Therefore it is necessary that the teacher stubbornly resist the strong temptation to sacrifice this condition of good experience. If the purpose be to secure the ends which may be gained by silent reading, the matter read should be very near the outer circle of the pupil's powers; if the purpose be to secure skill in oral expression, the matter should fall somewhat within that line. If all the mind's energy is employed in grasping the thought, the expression of that thought must necessarily be weak.

3. *Mastery of the thought and language.* "A mistake in emphasis is the mind's mistake," has come to be regarded as an axiom. Not

only does correct emphasis depend upon correct thinking, but the right use of other elements of expression is equally dependent upon a mastery of the thought. Expression is determined by the state of the mind at the instant the act is performed. If the thought is comprehended vaguely, the articulation will be correspondingly indistinct. A rising inflection is the natural sign of doubt; a falling inflection, the sign of positiveness. The sentence to be read may be positive in form and meaning, and hence require a falling inflection. But the prevailing idea in the mind of the reader may be that of doubt as to what the meaning of the sentence really is, and that state of mind will force the inflection up, instead of down, and thus make the expression a contradiction of the thought. It might be shown that a correct use of each of the many elements of expression is equally dependent upon a complete mastery of the thought, and that the consciousness of such mastery inspires the young reader with a confidence and enthusiasm that frees his expression from many defects, he would otherwise exhibit, and gives to it many positive excellencies.

4. *A vivid imagination.* In order to secure the best expression, not only must the reader understand the meaning of the words, comprehend the thought of the sentences, see the author's purpose in the composition as a whole, and the relations of cause and effect existing between that purpose and the means employed, but his imagination must form a clear mental picture of every object described, and by it he must put himself in the place of every character introduced. To read a piece of description is to produce in the mind of the hearer an image of the object, or scene, described. To read successfully an account of a series of actions is to cause the hearer to put himself, in imagination, in the place of the actors, and to participate in the drama in which they are engaged. The reader who expects the imagination of his hearer to be more active than his own, will usually meet with disappointment.

In commenting upon the manner in which the old man tells the pathetic story of Margaret, in the first book of "The Excursion," Wordsworth indicates the effect which a vivid imagination has upon oral expression :

" * * * * * He had rehearsed
Her homely tale with such familiar power,
With such an active countenance, an eye
So busy, that the things of which he spake
Seemed present. * * * * * "

[Other conditions of good oral reading will be discussed in a future number.]

JOSEPH CARHART.

OFFICIAL DEPARTMENT.

[From the Letter-Book of the Superintendent of Public Instruction.]

ADOPTION OF TEXT-BOOKS BINDING ON TOWNS AND TOWNSHIPS.

[No. 65, G.] The wording of the statute on the adoption and change of text-books is very defective. "The change of text-books," it says, "except in *cities*, shall be determined by such board, and each *township* shall conform as nearly as practicable to its action." (Sec 4436 R. S.) Incorporated towns, you observe, are not exempted from the control of the board, and yet are not expressly required to conform to its action. It was held by a former State Superintendent that such a requirement was unintentionally omitted, and that it is the duty of trustees of towns to introduce the text-books adopted by the county board so far as it is practicable to do so. I think that is the intent of the law. The action of the board in the matter of text-books is undoubtedly intended to be binding, not merely advisory. Trustees can require teachers to conform thereto on penalty of dismissal; but no means are provided for coercing trustees themselves. Possibly a mandate might be obtained from the Circuit Court by parties interested.

FAILURE OF TRUSTEES TO REPORT.

[No. 71, G.] Section 4451 of the Revised Statutes, imposing a penalty upon school trustees for failure to make certain reports, has never been repealed, and is in full force. Trustees should be notified, if necessary, of this fact, and assured that the penalty will be executed unless the reports are made within a reasonable time.

*SPECIAL LICENSES FOR GERMAN TEACHERS.

The teachers' license law, as amended by the act in force June 10, 1883, permits that "in examining persons for positions to teach in graded schools in cities and towns, the county superintendent may take into consideration the special fitness of such applicants to perform the services required of them, and shall make on the licenses issued to the applicants a statement of the kind of work for which they are especially qualified." I am of opinion that this language authorizes a county superintendent, upon request of the school board

*NOTE.—This opinion must be distinguished from one heretofore published on "The Status of German in the Schools," which was to the effect that persons who are to have charge of schools, (whether in cities, towns, or the country), and to teach all or any of the common branches, must be examined in all of said branches in English, even though it may sometimes be necessary to give instruction through the medium of the German language.

of a town or city, to examine a candidate for the position of teacher of German in the graded schools of such town or city in such a manner as will satisfy him that the candidate is qualified for such work, and to issue to the said candidate a license to teach the German language as a branch of study in the graded schools of a town or city; and the trustees of said town or city may remunerate a person holding such a license for performing the specific services thereby authorized, out of the common school revenue for tuition.

The above are selected from my recent decisions.

JOHN W. HOLCOMBE,
Sup't Public Instruction.

ADOPTION OF TEXT-BOOKS—POWER OF THE COUNTY BOARD TO HOLD EXTRA MEETINGS.—The following questions propounded by the Superintendent of Public Instruction and answered by Attorney-General Hord are self-explanatory :

Can a county board of education, when it has met on the first day of September, and the change of text-books was then and there determined, and the board adjourned *sine die*, again assemble before the first day of May thereafter and reconsider its action ?

The statute provides that the board of education shall meet semi-annually at the office of the superintendent, on the first day of May and September, and the change of text-books shall be determined by such board, and no text-book shall be changed within six years from the date of such adoption. If the board met on the day fixed by the statutes and performed the duty prescribed by law and adjourned *sine die*, the exercise of its power was exhausted until the next semi-annual meeting. It was and is the policy of the law to prohibit and prevent frequent changes of text-books, prompted and promoted by improper motives, and to protect the public against unnecessary expense in the purchase of school books, and therefore to provide that after the adoption of text-books there can not be any change thereof within six years from the date of such adoption, except by unanimous vote of all the members of the board. When the necessary text-books have been determined upon by the board it is the duty of township officers to conform to its action, unless its action was secured by such unfairness and fraud as the courts upon proper consideration would deem a retraction and nullification of the proceedings.

\$7,000,000, plus, is the amount of money left by Johns Hopkins, of Baltimore, to be divided equally between Johns Hopkins University and Johns Hopkins Free Hospital.

EDITORIAL.

An agent is wanted to raise a club for the Journal in every township in the State. Send for terms.

Persons sending money for this Journal can send amounts less than \$1 in *two* and *one* cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

James Baldwin, Supt. of the Rushville schools, and author of Baldwin's English Literature, will furnish for the Journal a series of articles on the "Old English Schoolmasters."

CORRECTION.—In a notice of the Island Park meeting the Journal stated that Mr Ireland advocated in his paper "a trial license without examination." It should have added, "to graduates of state institutions or reputable colleges, except in didactics." The correction is gladly made.

THE SEPTEMBER issue of the Journal, although larger than usual, was exhausted long before the demand was supplied. We much regret this miscalculation, but it is now too late to remedy it. A large number who desired to begin with September will be compelled to begin with October.

QUESTION.—"Can a trustee legally refuse to employ the teacher whom a majority of the patrons wish to teach their school?"

Answer—Yes. The matter is entirely in the hands of the trustee, *except* that he can not employ a person against whom the patrons have entered a protest.

EXPLANATION.—In the July number of the Journal, in stating that Mr. Gregg, after an interregnum of one year, had been re-elected superintendent of the Brazil schools, no reflection whatever was intended upon A. D. Hurst, who had charge of the schools last year. The entire school board of 1882-3 certify that he superintended and taught their schools "to the general satisfaction of school patrons and entire satisfaction of school trustees."

SCHOOL ATTENDANCE.—State Supt. Holcombe, in his talks to teachers' institutes, among other things, urges upon teachers the importance of securing a large attendance upon their schools. He insists that it is one of the duties of the teacher, to go out into the

highways and hedges and compel (in the Bible sense) the boys and girls to come in. This is a good point. By a little extra effort on the part of theachers, thousands of children can be brought into the schools, and thus be benefited.

TO-DAY, TO-MORROW, AND YESTERDAY.

Having recently heard a discussion in an institute as to the proper writing of to-day, to-morrow, and yesterday, we were led to an examination of authorities. The latest editions of both Webster and Worcester spell both to-day and to-morrow with a hyphen, and yesterday without the hyphen. Yesterday was formerly written with the hyphen, as we still write yester-morn, yester-evening, etc. There is no good reason for retaining the hyphen in these words, but the arbitrary rule of "good usage" settles the matter.

GRADING COUNTRY SCHOOLS.

In most of the counties in Indiana the grading of the country schools is an accomplished fact, and no one doubts its practicability or questions its utility. In a few counties this important work is just being inaugurated. There are a hundred reasons in favor of gradation and not one against it, and it is hoped that teachers will everywhere join heartily with their superintendents to make it a success.

Of course this grading will require some time, some ingenuity, and a little "common sense," but it can be accomplished in every school, and when it is done the work of the teacher is lightened, and the pupils greatly benefited.

GRADUATION FROM THE DISTRICT SCHOOLS.

As the country schools are graded and the scholars are required to follow a prescribed course of study, it has been thought wise to give to those completing this course, certificates or diplomas. This plan of graduating pupils from the district schools was adopted in a few counties two or three years ago, and last year a large number of counties tried it. Wherever tried it has proved a success. It stimulates the members of the advanced class to closer work; it exercises a good influence over all the lower classes; it prompts the teacher to put forth his best endeavors; it has an excellent effect upon the communities in which the graduating exercises are held. It is hoped that a still larger number of counties will engage in this work the coming year, and *now is the time to begin.*

GOOD BOOKS FOR BOYS AND GIRLS.

Every teacher who does his full duty will encourage the boys and girls of his school to read not only good papers but good books. A teacher should take at least one juvenile paper from which to read to his school. He should also assist his pupils in forming clubs for papers. In addition to this he should arouse an interest in reading good books. Suppose that a teacher should persuade a dozen pupils to each buy a book—no two alike—and then exchange with one another. In this way each pupil by buying one book and loaning it could have the privilege of reading twelve books. This could easily be made the nucleus of a neighborhood circulating library.

A teacher can encourage the reading of these books by judicious suggestions and questions, by having reviews written and read before the school or "literary society," by assigning topics found in them for composition, etc.

The teacher who has created in the mind of a child a love for good reading, has done much not only toward his mental training and culture, but also toward establishing good moral character.

In answer to the frequent question,

WHAT BOOKS SHALL I RECOMMEND?

The following list is submitted :

Papers.—St. Nicholas, (\$3), New York; Wide-Awake, (\$2.50), Boston; Youth's Companion, (\$1.75), Boston; Harpers' Young People, (\$1.50), New York; Our Little Ones, (\$1.50), Boston.

Stories and Fiction.—Wonder Stories, Arabian Nights, Pilgrim's Progress, Robinson Crusoe, Little Women (2 vols), Little Men, Old Fashioned Girl, The Young Crusoe, Wonder Book, Fairy Tales for the Household, Tales of Ancient Greece, Tanglewood Tales, Story of a Bad Boy, Rob and his Friend, How to Do It, Being a Boy, The William Henry Letters, Æsop's Fables, Bulfinch's Age of Fable, Hans Brinker, Jack Hazard, Joan the Maid, etc.

Biography.—Life of Washington, of Franklin, Alfred the Great, Boyhood of Martin Luther, Towle's Young Folks, Heroes of History, Washington and his Generals, Napoleon and his Marshals, Abbott's Cyrus and Alexander, Columbus, Cortez, De Soto, Abbott's American Pioneers and Patriots (12 vols.)

History.—Child's Childhood of the World; Yonge's Greece, Rome, France, Germany; Higginson's Young Folks' History of the United States, and Young Folks' History of American Explorers; Miss Kirkland's History of France for Young People, The Boys of '76, Tales of King Arthur, Famous American Indians, by Eggleston; Towle's Vasco de Gama, Magellan, Marco Polo, and Pizarro; Dick-

ens' Child's History of England, Boys of Other Countries, The Boy's Froissart, The Boys and Girls of the Revolution.

Travel and Exploration.—Jacob Abbott's Rollo's Tours in Europe, on the Atlantic, in Paris, in Switzerland, in London, on the Rhine, in Scotland, in Geneva, in Holland, in Naples, in Rome; The Boy Travelers in the Far East, Stanley's How I found Livingston, Tent Life in the Holy Land, Zigzag Journey in Europe, What Darwin Saw, Verne's The Great Travelers, Round the World by a Boy, Voyage of the Jeannette, Hayes' Arctic Boat Journey.

Scientific.—Little Folks in Feathers and Fur, Fairy Land of Science, History of a Mouthful of Bread, Madam How and Lady Why, The Boy Engineers, Six Little Cooks, Boys' Play-Book of Science, Queer Pets, Half-Hours with the Stars, with the Birds, with the Trees, with Insects; Science Primers.

For Little Folks.—Mother Goose Melodies, Prang's Natural History Series for Children, Story Without an End, Birthday Book for Children, Household Stories, Letters from a Cat, Our Darlings.

For Big Boys and Girls.—Anything in the above lists, and Politics for Young Americans, Plutarch's Lives, Shorter History of the English People, by Greene; Ivanhoe, Poetical Works of Whittier, Longfellow; Schonberg Cotta Family, Shakespeare, Stories from Shakespeare, by Mary and Charles Lamb; Dickens' Christmas Stories, David Copperfield.

Reference Books.—Dictionary, Atlas, Young Folks' Cyclopedia of Persons and Places, Young Folks' Cyclopedia of Common Things.

If any of the above books can not be had by application to your local bookseller, a card to Bowen, Stewart & Co., Indianapolis, will bring all desired information.

PUBLIC LIBRARIES.

Before the enactment of the library law of 1881, authorizing the assessment of three and a third cents on the hundred dollars by the school boards of cities, the only free libraries, except the township libraries, were at Indianapolis, Evansville, Richmond, Muncie, and Frankfort. Terre Haute and Lafayette have established libraries under the law of 1881. This law was amended in 1883 so as to extend its benefits to incorporated towns. It is probable the tax may be assessed this late if the county auditor will place the assessment on the duplicate. The law has no limit, as to time. Of course it should be assessed in time to avoid great inconvenience to the auditor. At the maximum rate tax-payers who are assessed on three thousand dollars will pay only one dollar, not more than the price of one book. Thus it may be seen that the payment of one dollar

gives the opportunity for reading three thousand volumes so soon as three thousand books are secured. The library tax is popular, if any tax can be said to be popular. The officers of the school, cities and towns, should act promptly in this matter, that the children may have good reading.

STATE BOARD QUESTIONS AND ANSWERS.

- Having recently received several requests that the "answers" be printed in the same number of the Journal containing the corresponding State Board questions, the following reply is submitted:

There is a large number of teachers and superintendents who believe that the answers to the questions should not be given at all—that it would be a great deal better for the masses of the teachers were they left to make their own answers.

Some years ago, when the members of the State Board assumed the responsibility of answering their own questions, the matter was fully discussed, and while there was a difference of opinion as to the propriety of publishing answers at all, the sentiment was unanimous that if published they should not appear in the same number with the questions.

The chief purpose in publishing the questions is to have teachers study and "look up" the answers in all cases of doubt. The only benefit to the teacher comes in the "looking up." In finding an answer to a question the collateral information gained is often worth more than the answer. Again, an answer hunted up is likely to be remembered, while an answer furnished to hand is sure to be forgotten.

If the answers were published with the questions, there is no doubt that in nine cases out of ten, when an answer was not known, the reader, instead of investigating for himself, would simply turn over a leaf and take the ready-made answer. Human nature is human nature, and there is no doubt that this would be the result; and thus the chief purpose in printing the questions would be defeated.

The only profitable way in which the questions and answers can be used, is for the teacher to answer each question for himself, making all necessary investigations, and then when the answers come, compare his answers with them.

It is believed that a little reflection will show that the course pursued by the Journal is the best possible one.

TERRE HAUTE.—The high school opened with 305 students, the largest in the history of the school. What city of the size can equal this? W. W. Byers is principal.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR AUGUST. .

THEORY OF TEACHING.—1. Name the steps that should ordinarily be taken in conducting a recitation in arithmetic.

2. When should the child begin the study of technical grammar? Why?

3. How should the purpose of the school as seen by the teacher differ from that seen by the pupil?

4. How would you lead a child to form a conception of a river, if he had never seen one?

5. What faculties of the mind are most active in childhood?

READING.—1. What kind of pauses in reading are not indicated by punctuation? Give two examples of commas that do not indicate pauses.

4, 3, 3.

2. What is mechanical (or "machine") reading, and how is it to be avoided?

5, 5.

3. What is emphasis, what inflection, and what should be our guide in giving expression to reading?

3, 3, 4.

4. In teaching reading what attention should be given to the authorship of selections, and their place in literature?

10

5. What are some of the reasons in favor of occasional concert reading?

10

6. Read a paragraph of prose and a stanza of poetry selected by the superintendent.

25 each.

PHYSIOLOGY.—1. Describe the process by which a broken bone is repaired.

2. How does judicious exercise affect the muscles? What is the effect of excessive exercise?

3. When are the effects of a cold bath beneficial? of a warm bath?

4. What makes starch an important food principle?

5. What can you state of alcohol as a poison? as an article of diet?

6. What is meant by nutrition?

7. What portions of the food are digested in the stomach?

8. What is meant by coagulation of the blood? Of what value is this property?

9. Why is it that air that has just been breathed is not fit for respiration?

10. What are the supposed functions of the medulla oblongata?

ARITHMETIC.—1. Does multiplying feet by 12 reduce them to inches? Why? 5, 5.

2. Divide $\frac{1}{10}$ of $\frac{1}{3}$ of $\frac{1}{7}$ by $\frac{2}{3}$ of $\frac{3}{7}$ of $\frac{1}{8}$. 5, 5.

3. From twenty and nine thousandths take twenty-nine thousandths. 5, 5.

4. A vessel at the equator sailed directly east 1° , $30'$, $20''$, how many geographical miles did it sail? 5, 5.

5. What is the weight of water which fills a vessel 1 dm. long, 40 cms. wide, and 30 cms. high? 5, 5.

6. What sum of money at 6% per annum, for 10 months, will yield the same interest as \$1,500, for 12 months, at 4%? 5, 5.

7. A 6-mo. note for \$5,000, with 6% per annum, was discounted—not in bank—3 months after date at 10% per annum; what were the proceeds? 5, 5.

8. A rectangular park is 80 rods long, 60 rods wide; what is the distance in feet between its opposite corners? 5, 5.

9. The area of a circle is 50.2656 sq. ft.; what is the radius? 5, 5.

10. A sells B tea worth 45 cts. at 48 cents; what should B charge A for coffee worth 9 cts. to balance the transaction? Analysis. 5, 5.

GRAMMAR.—1. Give three principal divisions of common nouns, and illustrate each class by an example in a sentence.

2. What is the rule for the position of *I*, *thou*, and *he*, when used co-ordinately in the same sentence?

3. Give five verbs which take two objects, one direct, and the other indirect.

4. Parse the italicised words in the following sentence: "*Many a soldier fell bravely fighting* for the right."

5. Name the eight grammatical relations.

6. What are the classes of adverbs with respect to signification?

7. Use the words *learn* and *teach* in two sentences, showing the contrast in their meaning.

8. Analyze: He that fights and runs away,
May live to fight another day.

9. Correct and give reason:

On either side of the field is an iron fence.

Is this harder than any examination you have had?

10. Write a newspaper paragraph on Decoration Day.

PENMANSHIP.—1. Which would you endeavor to secure first, correct form or rapid execution? 10

2. Classify the small letters by writing them. 10

3. What is the height of *r* and *s* compared with the other short letters? 10

4. Analyze the capital *S*; the letter *y*. 5, 5

5. Name the principles used in forming *l, a, c, x, O*. 5, 2 each.

NOTE.—Your writing in answering these questions will be taken as a specimen of your penmanship, and will be marked 50 to 0.

GEOGRAPHY.—1. Define the term continent. Give the names of the continents. 5, 5.

2. What three great natural regions make up the continent of North America? 10

3. Bound Maine—Name the principal mountain, river, and city of New England. 4, 6.

4. Name five large rivers of low Europe. 10

5. What are the great commercial countries of Asia? 10

6. Where is New Zealand? Describe it. 5, 5.

7. Describe the vegetation of moist, tropical Africa. Of the Sahara. 5, 5.

8. Where are the following rivers, and into what waters do they flow: Danube? Rhine? Congo? Murray? Potomac? 5 pts, 2 ea.

9. Describe the two chief cities of Australia. 5, 5.

10. What three great streams drain the plains of Northern Asia? 10

U. S. HISTORY.—1. When, where, and for what cause was the Republican party formed? 1st 2 pts, 3 each; last pt, 4.

2. What influence had the Kansas-Nebraska Bill of Douglas upon the subsequent history of our government? 10

3. Name the man most responsible for the secession sentiment prevailing at the South, and state concisely his doctrine. 1st pt, 3; 2d pt, 7.

4. Describe the battle of Gettysburg. 10

5. Why were Richmond, the Mississippi River, and Chattanooga necessarily great centers of conflict? 3 pts, 4 off for ea.

6. Name the turning point of the war, giving reasons for your statement. 1st pt, 3; 2d pt, 7.

7. State what you consider to be the greatest result of the war, with reasons for the same. 2 pts, 5 ea.

8. Name two important events occurring under each of the administrations. 5 pts, 2 ea.

9. Give some account of the financial crisis beginning under Grant's administration, with cause thereof, and state whether any panics ever preceded this, and if so, when? 3 pts, 1st 2 4 ea.; 3d 2.

10. What made the settlement of the Presidential claims of Hayes and Tilden, first so difficult, second so dangerous, and third in what way was it settled? Explain the manner. 3 pts, 3 for 1st 2 pts, 4 for last pt.

SPELLING.—1. Describe the sounds of *ä* and *ö*, and state their difference. 5, 5.

2. Write three words in which *a* has the sound of *ø*, and give the *a* its proper mark. 5, 5.
3. How is the word *the* pronounced when used alone, when before a consonant, when before a vowel? 4, 3, 3.
4. When is final *y* changed to *i*, and *es* added to form the plural? 10
5. What are the advantages of the written recitations in spelling? 10
6. Spell ten words dictated by the superintendent? 50

ANSWERS TO STATE BOARD QUESTIONS FOR SEPTEMBER.

ARITHMETIC.—1. The third root of; one million.

2. *a.* $\frac{2}{3}$ of 25 = 20.
b. $\frac{2}{3}$ of 6 = 4.
c. $20 = \frac{1}{2}$ of $\frac{1}{3}$ of 20 = $\frac{1}{6}$ of 24.
d. 24 = 6 times 4; therefore,
e. $\frac{2}{3}$ of 25 = $\frac{1}{2}$ of 6 times 4.
3. $\frac{2}{3}$ of $\frac{2}{3}$ of $\frac{2}{3}$ of $\frac{2}{3}$ of $\frac{2}{3}$ of $\frac{2}{3}$ = by cancellation $\frac{1}{18}$, or .4.
4. *a.* 2 kilometers = 200 meters.
b. 1 dekameter = 10 meters.
c. (7.5 m + 4.5 m) ÷ 2 = 6 meters.
d. 1 c Dm. = 1000 c m.
e. 200 c m × 10 × 6 = 12000 c m.
f. 12000 ÷ 1000 = 12.
g. 12 c Dm. × 300 = 3600. Ans. \$3600.
5. $\left. \begin{array}{l} 1800 : 1500 \\ 3 : 5 : 7 \end{array} \right\} :: 9 : 15$. Ans. 15 mos.
6. *a.* The interest on \$1 for 63 days at 10% per an. = 1.75%; therefore,
b. 982.50 = 98.25% of the face of the note; and
c. The face of the note will be \$1,000.
7. *a.* The ratio of $\frac{1}{2}$, $\frac{1}{3}$, and $\frac{1}{4}$ = the ratio of $\frac{6}{12}$, $\frac{4}{12}$, and $\frac{3}{12}$; therefore,
b. \$5,356 is to be divided in the ratio of $\frac{6}{12}$, $\frac{4}{12}$, and $\frac{3}{12}$.
 $\frac{1}{12}$ of 5,356 = 446, and the parts will be, 2672, 1648, 1236.
8. *a.* The farm makes 3 squares, each containing 10 acres.
b. 10 acres contains 1600 s. rods.
c. $\sqrt{1600}$ r. = 40 r., the width of the farm.
d. The farm is therefore 120 rods long.
9. $\sqrt[3]{1728} = 12$. Ans. 12 meters.
10. *a.* As the third receives one part, the second receives two parts, and the first four parts, making in all seven parts.
b. $\frac{2}{7}$ of 189 = 54, third one's part.
 $\frac{3}{7}$ of 189 = 81, second one's part.
 $\frac{4}{7}$ of 189 = 108, first one's part.

PHYSIOLOGY.—2. The portal vein carries venous blood and nutritive material from the abdominal viscera to the liver. Thence the blood passes to the heart by means of the hepatic vein and the ascending vena cava.

5. The chief function of the saliva is, by means of the ptyalin, to change starch of the food into grape sugar. By moistening the food, saliva facilitates swallowing and also brings out the flavors.

6. Chyle is that portion of the food, undigested or unabsorbed, that has passed from the stomach into the intestines and been acted upon by the biliary, pancreatic and intestinal juices. It differs from the chyme in that the fats, unaffected in the stomach, have been partially turned into soaps, thus giving a milky appearance to the fluid portion, and in that it is alkaline and not acid, the fermentation of the stomach having ceased.

9. Nerve fibers may be classed as *afferent*, or those carrying impressions to the spinal cord or sensorium, *efferent*, or those carrying volitions outward from the centers, and *medial*, or those connecting portions of the centers with each other.

10. Teeth are composed of nerves, blood vessels (temporarily), dentine, bone, and enamel. The parts of the tooth are root, neck, and crown.

GEOGRAPHY.—1. Latitude is distance north or south of the equator; Longitude is distance east or west of an established meridian.

2. Latitude, elevation, and sea winds, are the principal causes of the variation of temperature in different parts of the earth.

3. The inclination of the earth's axis to the plane of its orbit, and its fixed position during the annual revolution around the sun, cause the variation in the length of day and night.

4. The Torrid Zone is bounded on the north by the tropic of Cancer, on the south by the tropic Capricorn. The North Temperate is bounded on the north by the Arctic Circle, and on the south by the tropic of Cancer. The South Temperate is bounded on the north by the tropic of Capricorn, and on the south by the Antarctic Circle. The North Frigid zone lies north of the Arctic Circle. The South Frigid Zone lies south of the Antarctic Circle.

5. The surface of the Pacific States consists almost wholly of lofty plateaus and mountain chains.

6. The Amazon is one of the longest rivers on the globe, and carries to the sea more water than any other river. The La Plata System drains the southern parts of the central plain and eastern highland.

7. As three fourths of South America lie in the Torrid Zone, the climate of the Selvas and Pampas is warm.

8. Black Mountains; Roanoke, Neuse, and Cape Fear rivers.

9. Smoky and Cumberland Mountains; Cumberland and Tennessee rivers.

10. Ocean currents moderate both the heat of summer and the cold of winter. They assist in carrying vessels forward in their course.

PENMANSHIP.—1. The elements of the letter *a* are left curve, left curve, lower turn, right curve, slanting straight line, lower turn, and right curve; *o*, left curve, left curve, lower turn, right curve, and upper turn; *p*, left curve, slanting straight line, left curve, slanting straight line, upper and lower turns, and right curve; *C*, right curve, upper turn, left curve, and right curve; or the loop of the fifth principle and the eighth principle modified; *i*, right curve, slanting straight line, lower turn, and right curve.

2. The letter *O* is the eighth principle; the capital *U* is composed of the ninth principle, turn, right curve, and first principle extended an additional space; the parts of *m* are second, second and third principles; the parts of *n* are right curve and first principle repeated.

3. The small *r* and *s* are one-fourth higher than other short letters.

4. To simplify the forms of letters; to teach both mind and muscle the simplified form; to give a standard of uniformity; to educate the taste.

5. The line that bounds the height of the short letters, or those of but one space in height. The horizontal line, on which the shortest letters rest.

COUNTY INSTITUTES.

DECATUR COUNTY.—The Decatur County Teachers' Institute convened, for its 23d annual session, in Greensburg, August 13th, John H. Bobbitt, county superintendent, presiding. Teachers enrolled, 136, besides an unusually large number of visitors. W. H. Fertich, of the Shelbyville schools, the principal instructor, was present the entire week, and delivered two evening lectures, which were greatly appreciated. He gave instruction during the week on Reading, Arithmetic, English Grammar, and School Government, setting forth his methods and views in a clear and concise manner, thus rendering the institute profitable to all. G. H. Reynolds, of Chicago, gave several lessons in "Mathematical Geography," illustrating the true method of teaching this subject by the use of a tellurian. Instruction in Drawing and Arithmetic was given by J. A. Stagg, in a very creditable manner. The subject of Physiology was ably presented by C. Allison, of the Greensburg high school. He also gave two expe-

riminal lectures on Chemistry, which added interest to the occasion. J. M. Olcott, of Indianapolis, gave an interesting lesson upon the use of "Reference Books." State Supt. Holcombe was present on Tuesday, and made a very brief but pointed address.

Wednesday evening was devoted to a "Teachers' Social," which was one of the pleasant features of the institute.

J. D. WHITE, Secretary.

GRANT COUNTY always has good institutes. They are always large and enthusiastic. Perhaps no one in the state had done in it more fundamental, practical work. W. W. Parsons, of the State Normal, worked the entire week. Lewis H. Jones, principal of the Indianapolis Training School, was present a part of the time, as was the elocutionist J. T. McAvoy, W. A. Bell, and others. Supt. Osborn expressed himself specially pleased with the character of the work done and the interest manifested.

HAMILTON COUNTY had a large and profitable institute. J. Fraise Richard was present the entire week, and did excellent work. Prof. Pinkley, the elocutionist, also spent the week and did good work in his line. W. A. Bell and Cyrus Smith, of Indianapolis, each spent a day with us. County Supt. A. H. Morris has the confidence and support of the teachers, and is doing commendable work.

LAPORTE COUNTY.—The institute here was, as usual, large and attentive. Perhaps no county in the state can boast of more prompt and regular attendance and better order. Supt. Hosmer means business, and his teachers seem to be animated by his spirit. The outside workers were Geo. P. Brown, H. B. Brown, Eli F. Brown, J. M. Olcott, and W. A. Bell.

St. JOSEPH COUNTY.—The institute was reasonably well attended, and the interest excellent. The work was done almost exclusively by Eli F. Brown and George F. Bass, of Indianapolis, both experienced instructors. There is no better plan upon which to run an institute than this. The only trouble in most cases is the money. Calvin Moon, the superintendent, is universally respected and commended.

CLINTON COUNTY.—The institute, as usual, was full of life, earnest work, and interest. The attendance the first day was over 100, and averaged fully 140 to 150, being the largest yet known in the county. Supt. Mushlitz knows how to work things up in an orderly and enthusiastic manner. Excellent music was furnished us by Miss Frazee. Mrs. Supt. Boone and the Frankfort teachers were prominent among those who were prompt and attentive. Instruction in History, Physiology, and Geography was given by Prof. Cyrus W. Hodgkin, of the Richmond Normal School; and on Arithmetic, English, and Orthog-

raphy, by Prof. E. E. Smith, of Purdue University,—both of whom gave satisfactory work. Lectures were given on Wednesday evening by Prof. Smith, on Thursday afternoon by Prof. Hodgkin, and on Thursday evening by Judge Higginbotham. All the lectures were entertaining and instructive. The teachers of Clinton county mean to hold their own with any in the state.

MADISON COUNTY.—Supt. M. M. Croan had issued beautiful and well-arranged programmes, about two weeks before the institute, so every teacher knew "just what was coming." Promptly at 10 o'clock A. M., Sept. 3d, Supt. Croan called order, and organized by appointing Jay Lewis secretary, Lula Bedford enrolling secretary, and Grant Lockwood treasurer. It was found 133 teachers had enrolled the first session. The Supt. made a few opening remarks, and after devotional exercises introduced W. A. Bell, of the *Indiana School Journal*, who in his own inimitable style, soon had every body in a most happy humor. His lessons throughout the day abounded in humor and good sense.

Eli F. Brown, of Indianapolis, was present the entire session and did much good and made many warm friends among the teachers. Miss Kate Huron, of Danville, was present Tuesday, and created a most favorable impression. She is briraful of life and enthusiasm, and is away up in her profession. E. E. White, ex-President of Purdue, was present the entire week, and gave three lessons daily. One on Theory and Practice, another on Methods of Teaching, and the other in Mathematics. The Doctor is a whole institute of himself, and fully sustained his long established reputation as being one of the best educators in the country. Of course he was a general favorite with the teachers. H. N. Carver, of Valparaiso, was present on Friday, and gave interesting lessons in Grammar.

The evening sessions were of a more pleasant nature. Monday evening, after W. A. Bell's lecture, the annual teachers' reunion occurred. Tuesday evening Mr. Brown lectured on "Eminent Women." Wednesday evening Col. J. B. Maynard, of the *Indianapolis Sentinel*, delivered his lecture on "Pictures." Thursday evening Dr. E. E. White lectured. Friday evening was held the reunion of the graduates of the graded schools and teachers. All these exercises were greeted with crowded houses, in fact people were turned away each evening. The *Anderson Herald*, everywhere regarded as a good critic, says: "The present institute is without doubt the best from every point of view ever held in the county.

NOTES.—The club for the *Indiana School Journal* was 69, and will reach 100 before the holidays. We challenge the state to show a more moral, cultured, intellectual body of teachers than Madison county produces. All praise to Supt. Croan, who has the courage to

say that no teacher can teach school in Madison county that is intemperate, and he keeps his word. Average attendance about 225. Mr. Croan discharged his duties as superintendent under peculiarly sad circumstances—the death of his sister, Mrs. A. J. Dillon.

Madison county sent out 154 graduates last spring. Most of the schools of the county began Sept. 10th, to continue from six to nine months.

SUBSCRIBER.

NEWTON COUNTY.—The annual institute convened at Kentland Sept. 10th, Supt. Hershman occupying the chair. An enrollment of 100 filled the promise of success. The programme arranged by the Supt. was wisely chosen, and we may add ably carried out. Miss Mary Cox, of the State Normal, did us excellent work. State Supt. Holcombe was with us one day and evening, and his genial manners soon won him many friends. A resolution, incorporated in the others, was to the effect that the time for teachers' examination is too short. This institute demonstrated beyond doubt that the constant raising of grades has acted beneficially upon the mass of teachers. It was so grand a success in point of good instruction, interest, and attendance that a county association was appointed to be held at Kentland on the first Friday and Saturday of February, 1884, and so will we keep the ball rolling.

HATTIE W. HARRIS, Sec'y.

GIBSON COUNTY.—Teachers' Institute was held at Princeton, July 23d. The enrollment of teachers during the week was 184; average daily attendance, 175. Old Gibson, we think, is at the head of her sister counties in daily attendance. W. H. Fertich, of Mishawaka, was with us during the week. With this exception the work was done by home talent. The teachers will long remember the institute of '83 as one among the most profitable and pleasant ever held in the county. Our worthy county superintendent, H. A. Yeager, is the right man in the right place.

W. T. LUCAS.

KNOX COUNTY.—The teachers of Knox county met at Vincennes August 20th. Institute was opened with a well-timed address by Co. Supt. W. H. Pennington. He was followed by Edward Taylor, with a lecture on "A Teacher's Duty at a County Institute." W. B. Chrisler explained the working of the five-grade system in his county, which was considered by all our teachers as simple, easy, and practical. Mr. Chrisler was with us the entire week. Mr. Saunders, of Evansville, drilled the institute in elocution, and the older teachers of the county did noble service, which helped secure the unprecedented success of the institute. The enrollment and average attendance were larger than ever known before, and the interest taken in the work by all classes of teachers was noticeable on every hand.

Resolutions were adopted thanking the workers from abroad for

their able services, E. B. Milam for his past efficient work in managing the schools, and agreeing to stand by W. H. Pennington in his laudable effort to still improve the public schools of Knox county.

Total enrollment, 165.

R. F. WEEMS, Sec'y.

HANCOCK COUNTY.—Institute met August 20th. Enrollment, 140. The instructors were Messrs. Michael Seiler of the State Normal; J. M. Strasburg, of Greenfield; and Jonathan Rigdon, of Central Normal School. During the institute lessons were given by Messrs. Geo. P. Brown, Pres. State Normal; John C. Macpherson, Supt. of Wayne county; D. Dobbins, Supt. of Shelby county; and J. W. Smith, of McCordsville. Teachers present the first day 93, and the entire session was remarkable for punctuality and attention. It was the largest, and, in the opinion of many, the best institute ever held in the county. The following resolution was passed:

Resolved, That we recognize in our county superintendent, R. A. Smith, an efficient and earnest worker in the cause of education, and that we hereby pledge him our support in his efforts to elevate the condition of the schools throughout the county.

FAYETTE COUNTY.—The Institutes are always good, but the one of 1883 was certainly one of the best ever held in the county. Under the able management of J. S. Gamble, county superintendent, who is always awake to the best interests of the school work, it was arranged to hold a two weeks' session. The institute met Aug. 13th, with an enrollment of 75, which is a good showing for Fayette Co., it being one of the smallest counties in the state. Mrs. R. A. Moffitt, principal of the Rushville high school; Mr. Keltner, of the Anderson schools; Pres. Geo. P. Brown, of State Normal; W. A. Bell, Dr. R. T. Brown, and J. M. Olcott, were present during the whole or a part of the first week, and did efficient work. Mrs. Emma Mont. McRae, and Prof. R. W. McFarland, of the Ohio State University, a very able mathematician, were present during the entire second week, and did first-class work. Prof. J. L. Rippetoe, and others of our home teachers did good work. Several good evening lectures were given on different subjects, and on Thursday evening, Aug. 23d, a literary and musical entertainment was given by the members of the institute. The instruction given during the session was heartily appreciated by the teachers.

CLAY COUNTY.—The Institute convened in Clay City August 20th, and as a result of our Supt., John W. Stewart's energy, was one of the largest and most successful ever held in this county. The enrollment the first day was 102, and increased during the week to 174. Instructors: W. D. Dennis and Mrs. Mattie C. Dennis, of Bloomingdale, were present most of the week, and did excellent work. T. N. James, one of our home workers, presented the subject

of English Literature, and his work was well received, although it was rather a new feature in the county institute. O. T. Dunagan gave instruction in the Grube Method. C. W. Crouse, Mr. Williams, and others did work in the institute. Friday evening the teachers had a grand reunion.

H. LILLIAN DILSAVER, Sec'y.

WM. KATTMAN, Ass't Sec'y.

WELLS COUNTY.—The Wells County Institute has been in session during the past week at Bluffton, conducted by Supt. W. H. Ernst, assisted by Messrs. P. A. Allen, S. P. McCrea, W. J. Houck, N. D. Doughman, and W. Bliss. The total attendance was 142. The Outline prepared under the direction of the State Board was used, and gave satisfaction.

BARTHOLOMEW COUNTY.—The Bartholomew County Institute was a success. Institute work consisted in the presentation of methods for instruction, by the home talent of the county. Messrs. Kiracofe, Graham, and Sand were the principal workers, yet many others assisted. Lectures were given by Messrs. J. Fraise Richard, Kiracofe, and Baily. J. M. Olcott gave valuable ideas on school government. A very enjoyable social was held one evening. The interest in the institute was manifested until the last moment, despite the tropical condition of the atmosphere. An enrollment of 134, with an average attendance of 90, speaks well for Supt. Hacker, as he had a very short time for preparation.

TEACHER.

DAVISS COUNTY.—The twenty-third annual session of the Daviess County Institute convened on August 20th, in Washington. The only foreign instructor was Miss A. Kate Huron, of the Central Normal, Danville. D. E. Hunter, Supt. of the Washington schools, led the home workers. The work given by all the instructors was noted for its practicality. The interest manifested by the teachers was such that the enrollment and attendance constantly increased until the close. The enrollment on first day was 95, and by Friday it reached 180—more by 40 than ever before. Average for the week 139. Socials were held on Tuesday, Wednesday, and Thursday nights, at each of which the attendance was good, and a very enjoyable time had.

S. B. BOYD, Co. Sup't.

W. S. DAVIS, Sec'y.

UNION COUNTY.—The teachers of Union county convened at Liberty, in their annual institute session, August 27th. The session was of more than usual interest, and many young teachers were noticed present. Prof. McFarland, of Columbus, Ohio, and Prof. Johnson, of Avondale, Ohio, were present during the week, both doing very satisfactory work. Subjects of much interest to the teachers of today were discussed by the teachers each day. Institute closed with

an entertainment given by the teachers to a very large audience. The work throughout was excellent, and all went away much benefited. Much credit is due C. W. Osborne for the manner in which he conducted the institute, and the efficient work he is doing.

H. E. DUBOIS, Sec'y.

BLACKFORD COUNTY.—The annual institute of Blackford county met at Hartford City, August 20th. County Supt. Lewis Willman acted as president. He set an example worthy of imitation by his enthusiastic work, and fully confirmed his reputation as a leader in educational advancement. C. L. Clippinger, of Fort Wayne, was principal instructor, and won by his unflagging zeal the confidence of all. The institute was well attended, the average being 42, and the number enrolled about 60, which, taking in consideration the size of the county, makes a good showing. The work in the main was thorough and practical. The teachers of the county manifested a deep interest and enjoyed a long-to-be remembered social reunion.

H. L. KEGERREIS, Sec'y.

KOSCIUSKO COUNTY held its institute in Warsaw, Sept. 3-7. It was the largest and most regular ever held in the county. W. H. Fertich was present all the week, and was the principal instructor. He lectured on one evening and gave an elocutionary entertainment on another. His work was well received. The principal home instructors were G. L. Harding, J. P. Dolan, G. F. McAlpine, and J. P. Mathers. H. B. Brown, J. M. Olcott, and W. A. Bell were present a part of the time, and did acceptable work. State Supt. Holcombe was here one day, and made a very pleasant impression.

PERRY COUNTY.—The institute of this county met August 27th, at Cannelton. Supt. Whitehead appointed I. E. Connor president and R. J. Wilson secretary. The principal instructors were J. R. Weathers, L. Yarito, K. M. Deweese, G. W. Deweese, George Weidman, A. C. Huff, Jesse Riddle, J. H. Groves, Mrs. Royal, Mr. Ulrich, F. J. George, S. L. Payne, Roan Clark, G. P. Widman, and L. Ruddle. The instruction was well received, and the schools of the county will be the better for them.

The feature of the institute was a 4-page, 24-column paper, gotten up in excellent style. The business manager was M. F. Babbitt, and at the head of the editorial corps was J. R. Weathers. The paper was one of the largest and best we have ever seen in connection with an institute.

HARRISON COUNTY.—The institute was unusually large, and the work well done. Among the resolutions passed was the following:

Resolved. That no teacher who visits saloons or uses intoxicating drinks should be licensed to teach by the county superintendent.

HUNTINGTON COUNTY.—Institute was held August 27th, with an enrollment of 43 teachers, and an average of 90. Instructors: Morgan Caraway, Alonzo Mohler, Miss E. Collins, and Co. Supt. E. A. McNally. We followed the Outline as a guide.

WABASH COUNTY.—Fine institute at Wabash. W. H. Payne, of Michigan University, did excellent work. E. E. Smith, of Purdue, pleased and profited the teachers. Messrs. Humke and Mitchell were among the other instructors. Evening lectures by Payne, Little and Smith.

PERSONAL.

- J. W. Ball is principal at Milroy.
H. W. Graham is at Etna Green.
J. G. Hass is principal at Huntsville.
Q. S. Shipley has charge at Monterey.
G. L. Harding is captain at Leesburg.
M. Hurshberger controls at Frankton.
J. P. Dolan holds the fort at Syracuse.
J. J. Eckman will remain at Goodland.
W. R. Smethers is principal at Cicero.
D. D. Steiner is principal at New Carlisle.
P. A. Randall is at the head at Pendleton.
George W. Worley presides at Silver Lake
Charles Fagan is principal at Remington.
W. S. Ellis wields the "birch" at Osceola.
A. R. Hardesty is head man at Francesville.
A. Jones is principal of the Glenwood schools.
H. C. Fellow has charge of the Elwood schools.
E. J. McAlpine will direct the forces at Pierceton.
W. B. Alford is principal of the Zionsville schools.
J. C. Smith has charge of the schools at Raysville.
D. C. Hupp directs the young ideas at Alexandria.
E. E. Hendee is principal of the Winamac schools.
N. A. Hester is superintendent at North Manchester.
W. B. Woody is the "great Mogul" at Harveysburg.
A. N. Higgins controls school matters at Veedersburg.
N. C. Johnson is principal of the Oakland City schools.

E. E. Stevenson is principal of the Franklin high school.

A. F. Jenkins is superintendent of the Kentland schools.

J. C. Keenan is principal of the schools at Snoddy's Mills.

F. M. Fuller will direct the "young ideas" at Darlington.

John E. Gregory is the acting president of Ridgeville College.

L. M. Fall, from Ohio, is principal of the Fountain City schools.

J. B. Munger has left Churubusco to take the New Haven schools.

Presley Smith takes the schools at Centreton—in a new 4-room house.

T. B. Adeylotte is principal at Newtown, and John Cronk at Yeddo.

Lizzie Horney, of Richmond, is principal of the Wabash high school.

Walter Sayler, of Ohio, is at the head of the schools at Royal Centre.

J. E. Mannix, a graduate of the Danville Normal, is principal at Henryville.

Geo. W. Rice is principal of the Montezuma Collegiate and Normal Institute.

A. B. Stevens, last year at Orland, is in charge of the Angola schools this year.

F. E. Andrews, after two years' absence, goes back to the old stand at Sellersburg.

F. D. Tharp, of Raysville, goes to Kansas City to take a good position in the schools.

J. P. Funk has entered upon his tenth year as superintendent of the Corydon schools.

Henry Gregory, Jr., and not Henry George, is in charge of the Leavenworth schools.

Geo. W. Dealand superintends the Perrysville schools. This is his third year in this place.

J. M. Stallsworth, a graduate of the Danville Normal, is superintendent at Charlestown.

G. F. Kenaston is superintendent, and J. M. McBroom principal of the high school at Attica.

Joseph Moore, who resigned the presidency of Earlham College last spring on account of sickness, is still in North Carolina, but much improved in health.

E. N. Brown, a graduate of Michigan University, is one of the faculty in the Elkhart Normal.

John Schurr, of Muncie, a graduate of Asbury University, is principal of the New Castle high school.

P. H. Kersch, of Crawfordsville, a graduate of the State Normal, has charge of the Rensselaer schools.

W. E. White, son of E. E. White, ex-president of Purdue University, is principal of the Albion schools.

J. M. Strasburg, formerly of Lafayette, but more recently of Richmond, is superintendent at Greenfield.

Walter S. Smith, the first superintendent of Marion county, is now principal of the schools at Falmouth, Ky.

H. G. Woody, having spent the summer West, has resumed his duties as principal of the Kokomo high school.

V. Livengood is principal at Covington. As he has a new wife to advise him the schools will doubtless improve.

W. R. Snyder, five years principal of the Shelbyville high school, is now at the head of the Muncie high school.

D. D. Bogart, last year at North Vernon, is now superintendent of the Chattanooga schools, at a salary of \$1500.

J. H. Martin, superintendent of the Madison schools, is reported as doing first-class work and giving satisfaction.

Last month's Journal should have said that Miss Calla Harrison was the first and only *lady* graduate of Hanover College.

Thomas Newlin, who was principal of Spiceland Academy, is spending the present year at Michigan University, studying.

Wm. Irelan, last year of Wolcott, returns this year to Burnettsville, where he has taught most of the time for the last 25 years.

H. B. Brown, principal of the Valparaiso Normal School, says that the report that he has undertaken the control of the Ladoga Normal, is wholly without foundation. He has nothing whatever to do with the Ladoga school.

Albert W. Stahl, M. E., U. S. N., graduate of the Stevens Institute at Hoboken, and of the Naval Academy at Annapolis, has assumed the chair of Physics and Mech. Eng. in Purdue University. He has made a good beginning.

J. S. Gamble, Supt. of Fayette county, has been in ill health for two months past. He was prostrated with typhoid fever in the midst of his institute. He has the sympathy of a large circle of acquaintances and friends in the educational field.

A. J. Garland is the name of the new principal of the Ladoga Normal School. His associate principal is A. F. Knotts, both graduates of the Valparaiso Normal. They will be assisted by R. S. Gleason; Retta Coveney, Music; Mrs. Litta Ditts, Art; A. J. Hall, Penmanship—all former students at Valparaiso.

J. J. Mills, assistant superintendent of the Indianapolis schools, who was compelled to take a leave of absence the latter part of last school year on account of ill health, is now in his usual health and at work in his old place. His many friends will be pained to know that he has lost the sight of one of his eyes, perhaps permanently.

John G. Overton, who retired from the superintendency of the Montgomery county schools last June, after a service of eight years, and a school service of 20 years, leaves an excellent record. He has been an attendant at every county institute and normal ever in session in the county, and attended every state teachers' convention and convention of county superintendents held in the state during the eight years just passed, save one held at Fort Wayne. He leaves a host of friends among the teachers of the county.

Dr. E. E. White, ex-President of Purdue University, left the institution with the full confidence of his associates, as indicated by the following resolutions:

WHEREAS, Dr. Emerson E. White has recently severed his connection with Purdue University as its President; and whereas, the members of the faculty who have been associated with him, desire to recognize the value of his work and personal worth; therefore, be it

Resolved, 1. That during the seven years of his connection with Purdue University, his administration has been marked by vigor, originality and eminent wisdom, and for the organization of this institution on a plan which, at that time, had no precedent, he deserves the highest praise.

2. That Purdue University has suffered a most serious loss in the withdrawal from its management of one in whom firmness, kindness, and executive ability of the highest order are harmoniously blended.

3. That we hold Dr. White in the highest esteem as a personal friend, a Christian gentleman, and a ripe scholar, and we greatly regret the loss of his companionship and support.

4. That our heartiest wishes for his welfare follow him in whatever labor he undertakes.

Passed unanimously by the faculty September 3, 1883.

L. S. THOMPSON, Sec'y of Faculty.

These resolutions express very fairly the estimation in which Dr. White is held by the teachers of Indiana. He did a good work at

Purdue, and has left an excellent foundation for his successor to build upon. He recently declined a \$3000 position in the East, preferring for the present to devote himself to literary work.

GEMS OF THOUGHT.

Punctuality is the hinge of business.

Never laugh at the misfortune of others.

Never give a present hoping for one in return.

Never make yourself the hero of your own story.

Never give a promise that you do not intend to fulfil.

Never say to the back what you would not say to the face.

Never associate with bad company; have good company or none.

Never refer to a gift you have made or a favor you have rendered.

Do to-day thy nearest duty.—*Goethe*.

Who best can suffer best can do.—*Milton*.

Be ashamed of nothing but sin.—*John Wesley*.

Hard workers are usually honest. Industry lifts them above temptation.—*Bovee*.

An effort made for the happiness of others, lifts us above ourselves.—*Mrs. L. M. Child*.

Never fail to tell the truth. If truthful you will get your reward. You will get your punishment if you deceive.

Labor is one of the great elements of society—the great substantial interest on which we all stand.—*Daniel Webster*.

A man should never be ashamed to own he has been in the wrong, which is but saying, in other words, he is wiser to-day than he was yesterday.—*Pope*.

If it were not for labor, man would neither eat so much, nor relish so pleasantly, nor sleep so soundly, nor be so healthful, nor so useful, so strong nor so patient, so noble nor so untempted.—*Jeremy Taylor*.

Speak gently! 'tis a little thing

Dropped in the heart's deep well;

The good, the joy, that it may bring,

Eternity shall tell.—*D. Bates*.

Vespasian, the Roman Emperor, throughout his life, used to call himself to account every night for his actions of the past day, and as often as he found he had passed any one day without doing some good, he entered in his diary this memorandum: "Diem perdidit." "I have lost a day."

MISCELLANY.

GREENFIELD has a new superintendent, J. M. Strasburg, and a new 4-room school building.

The Summer Normal held at Columbia City by Co. Supt. Adair and J. B. Munger numbered 89.

BLUFFTON.—The schools have opened full under the superintendency of P. A. Allen. The high school numbers 76.

MARION.—The Marion school board has established a free Kindergarten, with Miss Harriet A. Leete, of Potsdam, New York, as teacher.

UNION CHRISTIAN COLLEGE, Rev. E. Mudge, President, located at Merom, has opened with good attendance. The institution does thorough work.

MUNCIE.—The Muncie schools have opened most favorably, and the prospects are bright for a harmonious and successful year's work. The new superintendent, Hon. John M. Bloss, is feeling happy and hopeful.

FRANKFORT, with R. G. Boone at the head of its schools, is beginning its new year in a manner every way satisfactory. But few cities in the state have an educational standing equal to that of Frankfort.

CHICAGO employs 1019 teachers, 976 of whom are ladies. Of the 43 men 27 are principals. All primary teachers receive from \$400 to \$700 per year. Grammar grade teachers are paid \$50 per year more than the primary teachers.

LOGANSPORT.—The *Logansport Journal* says the public schools of Logansport were never in a more prosperous condition. The corps of teachers is excellent, and the attendance larger than ever before. The public schools of Logansport are not excelled by those of any other city in the state, and we doubt if they are equalled by any. J. K. Walts is there with his little hatchet.

CHEAP MONEY ORDERS.—We wish to call the attention of our readers to the great reduction in cost of sending money by the Post-office department. Since July 1st there can be obtained at any money order office postal notes in sums of \$5 and under by paying a fee of three cents. We regret that these postal orders are issuable only from money order offices, yet it is an advance in the right direction, and we hope our readers will make use of this new and cheap means of sending money for subscriptions.

SOUTH BEND.—Schools opened fuller than ever before, 1512 being the grand total—117 pupils in the high school.

ST. JOSEPH CO.—The trustees and teachers, led by the Co. Supt., Calvin Moon, are planning for a grand day with the children at the county fair. Extensive school exhibits will made; trustees, teachers, and children will attend in a body; a grand procession, formal reception, and a good time generally is promised. Such educational displays are profitable to all concerned.

WARSAW.—The schools opened fuller than ever before. Supt. John P. Mather is giving good satisfaction. He has induced the powers that be to take advantage of the provision of the late law on public libraries, and so about \$400 will soon be added to what is already a good school reference library. Four hundred dollars a year will soon give Warsaw a library that its citizens can be proud of,

INDIANAPOLIS.—The high school opened this year with a hundred more students than it opened with last year. The number enrolled the first week was 623. The school is in excellent condition under the principalship of W. W. Grant. A new building for it is sadly needed.

The other schools opened *full*, the enrollment the first week exceeding their enrollment for the same time last year more than 500. Supt. Tarbell is doing very efficient and very satisfactory work.

THE ELKHART NORMAL SCHOOL—This is a new school asking for recognition among the many schools of the kind in the state. Its two terms already held were such as to give encouragement to the principal, H. A. Mumaw. He has arranged for a good corps of instructors and will do good work. No report of the fall opening has yet reached the Journal.

CENTRAL NORMAL, DANVILLE, opened with increased attendance. The enrollment will probably reach 400 by the close of the term. Everything is moving off nicely. The best of feeling exists between faculty, students, and citizens. Many new rooms, and more students can be accommodated than ever before. The regular classes are all full. More than 40 in the scientific course. Have quite a number who have been principals of graded schools. Commercial and all other courses are well filled.

THE NORTHERN INDIANA NORMAL AND BUSINESS INSTITUTE, at Valparaiso, has opened "booming" again. This is a phenomenal school. From the date of its opening till the present—7 years—it has grown till it is the largest school of the kind in the United States, if not in the world. H. B. Brown, the president, is the embodiment of good fellowship, gentility, energy, perseverance, aptness to instruct, power to make and hold friends, and executive ability.

BUTLER UNIVERSITY reports an increase in attendance over any previous year. Butler has a good working faculty, and deserves the hearty support of its friends.

FRANKLIN COLLEGE.—Rev. W. T. Stott, president, is happy over its prosperous opening. It is gradually gaining a firm footing and is doing a good work. This school deserves better of the Baptists of Indiana, considering their wealth and their numbers.

RICHMOND NORMAL.—The "Announcement" of the Richmond Normal is a very neat 12-page pamphlet, giving the course of study, faculty, purposes of the school, and all needed information to those expecting to attend. Cyrus W. Hodgins is principal. The school has opened with about 30 students.

✓ ASBURY UNIVERSITY opened with about 450 students the first week. The history of this institution refutes the current idea that increasing the exactions and raising the standard will diminish the attendance. Asbury is becoming quite cosmopolitan: Finland, England, Germany, Japan, and all our own country, including the colored man and Indian, are represented. The best of order prevails and good work is being done. Recitations began on opening day. Dr. Martin and his co-laborers have been working manfully to meet the demands necessary to secure the De Pauw endowment fund, and are hopeful of success.

✓ PURDUE UNIVERSITY.—Owing to the fact that the trustees last June voted to discontinue the lower class in the "Academy," which was always largely attended, there is a little falling off in the attendance as compared with the opening last year; but the attendance in the college classes and in the senior academy class was never before so large. The agricultural and mechanical departments are also fuller than ever before.

President Smart is carrying forward the excellent work done by ex-president White in such a way as to receive general commendation.

THE STATE UNIVERSITY has opened with nearly its usual number, notwithstanding its irreparable loss in the burning of one of its principal buildings, its cabinet, laboratory, etc. The trustees have done everything within their power to make good the loss so far as the running of the school is concerned, and the faculty are surmounting all difficulties. After all *the teacher* is the chief part of a school. A live teacher will make a good school anywhere. If he has not the necessary apparatus and helps, he will improvise them, he will make substitutes for them, he will reach the desired end.

No one acquainted, doubts the ability of Dr. Moss and his associates.

EARLHAM COLLEGE.—This college opened "larger than ever before," and is in a prosperous condition. Earlham deservedly stands high for its thorough, efficient, and honest work. Since the burning of the cabinet at the State University, it has perhaps the largest and best assorted cabinet in the state. Its observatory is said to be the best in the state. Earlham needs sadly more endowment, and the prospects are favorable for help in the near future. The Friends can not afford not to help it.

HANOVER COLLEGE.—This College began the work of its fifty-first year September 12th. It is the custom in this institution for one of the faculty, at the opening of each term, to deliver a lecture before the students and visitors. This lecture, this year, was delivered by Prof. J. F. Baird. His subject was "Some of the Dangers of Students." It was an admirable discussion of the subject. The attendance of old students was full. A large number of new students matriculated the first day, and they are still coming. The Freshman Class is one of the largest for many years. College Point House, with its attractive accommodations, adds greatly to the outfit. Mr. Archer, the new professor, is rendering excellent satisfaction. The new building erected last year by the Y. M. C. A. is said to be the only one in the United States in connection with a college. Hanover had the honor to lead off in this state in the organization of a college Y. M. C. A.

THE STATE NORMAL SCHOOL has opened fuller than ever before, for a fall term, there being present nearly 400. This is very large considering the strictness of the school: viz., that there is but one course of study—the *teachers' course*. Admitting only teachers or those who expect to become such, and bending all its energies to the end of making teachers, it stands deservedly high as a strictly *normal* school. According to the estimate of such men as W. H. Payne, of Michigan University, Wm. T. Harris, late Supt. of the St. Louis schools, it has but few equals among the normal schools of the United States. It not only makes a thorough study of the legal branches from the *professional* standpoint, but it requires a mastery of methods and the principles underlying those methods, presented according to psychological laws: and in addition it provides model schools for observation, and, later, for actual practice and criticism.

Pres. Geo. P. Brown is proving the right man in the right place.

WABASH COLLEGE.—It will be fifty years the 3d of next December since Prof. Caleb Mills organized the first class in Wabash College. Like other institutions it has had to contend with poverty. In spite of this its aim has been to keep out of debt, and one secret of its success is found in this fact. Occasionally forced to incur debt, its his-

tory financially is found in John Randolph's famous "Pay as you go." The equipments of the college are excellent and quite extensive. These are now receiving a large addition. The rooms of the Department of Natural History—Prof. Coulter's—will be ready for use the beginning of the next term. The present Cabinets in Central Hall are overflowing, and will be relieved of their fossil collections, leaving the minerals. The fossils, herbarium, archæological collections, etc., will be transferred to the new quarters of Natural History. This gives room for growth in the two departments. There is necessity for this, found in the fact that already there are large collections labeled and yet not in place. The College Library is also having a vigorous growth. The present term opens with pleasant predictions of a prosperous year. The buildings and grounds never appeared better. The new boiler house is nearly ready for use. This adds greatly to the safety of the college.

Dr. Tuttle is still the honored head of the Faculty, and takes great pride in running the college on a high plane

TOWNSHIP INSTITUTES.

The law requires the holding of township institutes each month, and this question arises: How can they be made most profitable?

For the benefit of teachers in counties in which a programme, with outlines, is not published, and as suggestive to all, the Journal will give a programme for each school month. They are prepared by L. P. Harlan, Supt. of Marion county schools.

PROGRAMME FOR OCTOBER

1. *The Opening Exercise*.—Its purpose; the material to use; its sources; the manner of conducting it; its effect on the school considered (1) as a pleasurable exercise, (2) as a means of learning facts, (3) as a means of moral instruction, etc., etc. Discussion.

2. *Primary Reading*.—Pronunciation, the alphabetic, phonic, and associative or word methods of teaching it; the *method* of procedure in each case; the combination of the three methods in one lesson, (1) the name of the word from its form, (2) its sounds, and (3) its letters; cultivation of vocal organs of the child by means of (1) position, pronouncing drill, etc.; (2) ready recognition of words, etc. Discussion.

3. *Number*.—How expand the idea of number in the child's mind; how develop the idea of addition, subtraction, etc.; show how numeration and notation must be taught (illustrate on board); take up written work and show method of teaching addition and subtraction by solution of practical examples; explanations, etc. Discussion.

4. *First Steps in Geography*.—The logical development of the subject by a series of geographical object-lessons, including exercises on points of the compass, design and construction of a map, explanation of geographical terms, and thence the natural transition into detailed geography. Discussion.

5. *Oral Spelling*.—(1) Directions for preparation of lesson; (2) the essentials of class drill; copying lesson on slate, reading the words in class, order of pronouncing words, correct pronunciation on part of teacher, correction of misspelled words, reviews, etc., etc. Discussion.

6. **Good Behavior*.—(1) What constitutes it; (2) motives for it; (3) habits of good behavior—how attained; (4) methods of teaching same; (4) common errors.

7. *Essay*.—[Subject to be selected by essayist.]

8. *Management of the School*.—Attention to seating pupils; time for study and recitation; neatness; signals for classes; communication; occupation of pupils; number of classes, etc. Discussion.

9. *Literary Exercises*.—Such as Oration, Declamation, Select Reading, Biographical Sketch, or other work. Adjournment.

BOOK TABLE.

The Cumulative Method for Learning German. By Adolph Dreyspring. New York: D. Appleton & Co.

This book is based upon the idea that in the acquisition of a foreign language every available faculty should be employed. So both the eye and the ear are appealed to, and the student learns to speak the language as rapidly as he learns to read it. The plan is without question the coming one, and teachers of German should see the book.

White's Elementary and New Complete Arithmetic. A two-book series. Cincinnati: Van Antwerp, Bragg & Co.

More than thirteen years ago Dr. White put forth his first series of Arithmetics, and their great success is their strongest recommendation. The present edition is in answer to the demand for a *two-book* series, and it gives an opportunity to bring up to the latest thought all points wherein the old series may have fallen a little behind. In this revision neither author nor publishers have spared expense or labor. They have made these books worthy the patronage of the best schools in the country. The metric system has received special attention, which adapts it to the common wants of the

*From State Institute Manual.

school-room. No pains have been spared in making these books attractive to the eye and pleasant to the touch. The paper and the binding are all that could be desired by the most fastidious.

The author has also a *Manual of Arithmetic* for the special use of teachers, which contains suggestions, directions, illustrative solutions and problems for dictation.

BUSINESS NOTICES.

THE STATE NORMAL SCHOOL.—A correspondent of the *Indianapolis Journal*, in his report of the recent commencement exercises of the State Normal School, makes the following statements:

"The school differs materially from all other schools in the state. It differs radically from all other normal schools. The following are some of its characteristics:

1st. It admits only such as wish to qualify themselves to teach at least two years in the state.

2d. It makes a specialty of professional teaching. It has no "commercial department," no "musical department," no "classical department," but the whole school is a "teachers' department." The "teachers' class" is not a little side-show, but the main thing. All the academic work is done with a view of "how to teach it." The students are taught to look at subjects from the teacher's standpoint.

3d. This school gives more time to the professional work than does any other normal school in the United States.

4th. It has connected with it training schools in which young teachers can observe the work of model teachers, and in which they themselves can practice their own theories under the eye of a critic teacher.

5th. It is not exaggerating the fact to say that this school gives a better mental discipline than does any other school in the West. The logical methods pursued in the instruction is manifest in every essay and oration given by the graduates.

6th. At the end of the three years' course of study the graduates are given simply a "certificate of graduation," and are not given the regular diploma until they go out and for two years demonstrate their ability to successfully teach and manage a school. Hence, there are always two classes of graduates on commencement day. Out of the thirty-five graduates this year, only eight were selected to deliver their addresses. These were selected, not with reference to merit alone, but to best show the working of the school, and to give variety.

"Boil it down" is time-honored advice to all who intend putting their thoughts on paper. The editors of THE TEACHERS' AND STUDENTS' LIBRARY have succeeded so well in condensation that they have placed before the teacher a complete *cyclopaedia* in one octavo volume of 532 pages. It contains, besides the common branches, the sciences, school law, civil government, mythology, parliamentary usages, general literature, etc. It is published by T. S. Denison, Chicago. Price, only \$3.00.

INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

NOVEMBER, 1883.

No. 11.

SCHOOL READING AND THE USE OF BOOKS.

W. B. POWELL, SUPT. SCHOOLS, AURORA, ILL.

SOME branches of study are mainly useful in giving to the mind power over itself and its surroundings, that it may gain from some or all of the many sources of knowledge, what is best suited for its growth and tastes; others are mainly useful in furnishing food or materials for growth and gratification. The former may be likened to the instruments with which, the latter to the material upon which the mind operates. The former, when properly acquired, render the mind self-supporting; the latter are the sources of supply.

Knowledge of an instrument and skill in its use are the powers with which the user is invested. Skill in its use, however, can not be acquired without practice in the special work for which the instrument is designed. The information afforded by a disciplinary branch of study and the skill in the use of that information, are the power with which the pupil should be invested by the pursuit of that study. It is not reasonable to expect the pupil to acquire power without the practice from which alone skill is derived.

Reading is the most important of the power-giving branches, yet with how little power does its pursuit invest the pupil. The reasons are apparent. The pupil gains a knowledge, or rather comes into possession of an instrument, but acquires no skill in

its use. He can not; the material upon which to practice is not afforded him. No food-furnishing studies are found in his list.

Reading should be made also the most important of the food-furnishing branches of our common school, yet how little attention is given to making the pupil acquainted with the sources of interesting and useful knowledge, and to making him familiar with the processes by which this knowledge may be obtained and applied to the purposes of life, especially in the grades below the high school.

The subject of reading as a branch of study is at first distinctively a power-giving study, but later it should be made distinctively a means of ascertaining sources of information and of becoming familiar with the processes of obtaining and utilizing such information.

Up to a certain grade the child should *learn* to read, after which he should *read*.

Where is the dividing line? The transition should be in progress from the beginning, but there is a time previous to which the work is distinctively of one kind, and after which it is distinctively of another. Schools that have no libraries, or that cause their pupils to buy and use no other than the ordinary reading books, never do anything but the first part of this work. Where the library is first found and used the dividing line may be found. In most cases this line is found between the grammar school and the high school, or in some of the higher grades below the high school. This is too late. The great mass of pupils, as is well known, never reach the higher grades of our schools.

Of what avail are the records of facts and experiences contained in books to him who has learned only to call words or to read fragments of detached thought, who has never learned the purpose and value of books by being with them as a companion, nor obtained the art, nor experienced the pleasure of using books by using them.

This dividing line must be made earlier; must be found lower in the grades.

Too much time is spent on the first part of this work, the part that is necessarily largely mechanical. The great mass of our

pupils acquire little more than the ability to call words, or to pronounce sentences and extracts, and the restless, enterprising ones in search of entertainment gravitate to low, worthless or pernicious literature, for such only is on the plane of their appreciation.

Shall we give the child the possession of a key and leave him to enter by means of it such doors as he may unlock by chance, or because of an inclination that has not been cultivated or influenced by any experience? The answer to this question will determine not only the reading work to be done in our schools, but will also indicate the minimum in education, so far as reading is concerned.

Now, I think the first part of this work should be accomplished in most cases with the third year of school life, that is, when the child finishes the Third Reader he shall have learned to read, he shall have come into possession of the key. After that he must learn what to read and how to read it. This he can learn to do as he learns other things, by doing, and this doing can not be accomplished by the use of ordinary reading books or any other compilation of extracts, though each extract be a gem.

Believing as I do, I have thrown out from the school all Readers above the Third, and all other compilations of extracts except for reference.

In place of the Fourth, Fifth, and Sixth Readers, as ordinarily used, we ask our pupils to buy either the full works or a desirable abridged work of an author with whose writings we wish them to become acquainted.

Modern Classics, by Houghton, Mifflin & Co., represent what I mean by abridged works, though I have advised pupils, and in most instances they have followed my advice, to purchase the full works of such authors as Longfellow, Scott, Tennyson, Bryant, Shakespeare, or entire volumes of Dickens, Bayard Taylor, Irving, Hawthorne, and others.

Pupils, after reading in the Third Reader, are put into Scribner's Journey Book, for which they have been prepared by similar work and by drawing maps of journeys and familiar places about their own homes, to cultivate their imaginations. Care

is taken to begin with the journey nearest home (in our case the journey down the Mississippi River), that it may be a continuation of the work the pupils have already done. Much care is taken to train the pupils to read understandingly, and to distinguish between principal or important facts and the subordinate or less important facts. This is excellent work in language as well as for teaching pupils how to read. \

Soon after the introduction of the Journey Book the pupils are asked to buy Whittier's Poems. Both books cost very little more than a Fourth Reader. The pupils are made to feel that these are library books that they must preserve for future use and as a nucleus for a private library. Easy poems are selected, and these are read as class exercises, the Journey Book being used under the head of Geography at another recitation hour.

Extracts or entire short poems are committed to memory, but the pupils select their own extracts so that they may understand their relation, and thereby better appreciate them.

This work of learning gems by our pupils can be made most profitable only by the pupils making their own selections from articles read and understood, or from authors studied and admired.

I can see little good in committing to memory three selections from Whittier's Barefoot Boy, all of which are credited to Mr. Whittier, but not to the poem in which they are found. I can see much good in many ways in having the children commit to memory one or more selections from the Barefoot Boy after they have read and studied the whole poem, if the selections be such as will stand for the whole of that beautiful production.

I can see little good other than to cater to a senseless, aimless sentimentalism, in committing to memory three lines and a half beginning as follows, and accredited to Thomas Jefferson: "We hold these truths to be self-evident: that all men are created," etc. But I can see much good in many ways that will result from committing to memory the first paragraph of the Declaration, by a lad who has thoroughly studied the history of the Revolutionary War and the formation of the government. A panoramic view of the whole history of that struggle, together with the hopes and fears and prayers of the "signers," lies con-

cealed within his mental self, and the whole will be revealed to his admiring gaze every time he repeats, "We hold these truths to be self-evident: that all men are created equal; that they are endowed by their Creator with certain inalienable rights; that among these are life, liberty, and the pursuit of happiness."

The whole tissue of circumstances connected with the murder of White; all the efforts made at concealment, all the appliances and revelations pertaining to the detection of the dark crime stand before the mind in panoramic view to him who repeats understandingly: "The deed is done. He retreats, retraces his steps to the window, passes out through it as he came in, and escapes. He has done the murder. No eye has seen him. No ear has heard him. The secret is his own, and it is safe. Ah! gentlemen, that was a dreadful mistake. Such a secret can be safe nowhere."

Upon the library table (a feature of every school-room), in the room where the Journey Book and the book of poems have been introduced, are found two or more copies each of such books as Hawthorne's Wonder Book and True Stories, Higginson's Young Folks' History of the United States and Young Folks' Book of American Explorers, Dodge's Stories of American History, Mrs. Monroe's Story of Our Country, Goodrich's Child's History of the United States.

The children read these books with great delight, the teacher taking pains occasionally to aid them to read understandingly, and to increase their interest in reading by talking with them about what they read, and sometimes by reading to them from other books upon the same subjects.

In the grade above this (the 5th) the study of History is begun from the standpoint of biography. The work very profitably begins with the Life of Columbus. This is good work in continuation of the reading done in the Journey Book, for by this time children have finished the journeys in our own land.

Many copies of the Life of Columbus, by different authors, are found on the reference table. The pupils read these by the direction of the teacher according to a syllabus. The lives of other representative men are studied, in proper succession. (See Course of Study, page 158, as also for course of history carried

through the Grammar School, (see pp. 158-187.) Several authors in each case are found on the reference table, and not unfrequently from three to five copies of some of the most available biographies are furnished.

Auxiliary reading matter is furnished in abundance, such as *The Building of a Nation*, *The Boys of '76*, *The Boys of '61*, *Old Times in the Colonies*, *The Story of the U. S. Navy*.

Many pupils will desire to read contemporaneous history. They are encouraged to do so, and such books are furnished as *The History of England*, *The History of France*, *The History of Germany* by Miss Yonge, *Dickens's Child's History of England*, *Short History of the English People* by Green, *French History* by Sarah Brook, *A Short History of France* by Kirkland, *The War of the Races*.

Horace Mann said, after hearing one of Mr. Emerson's lectures, "He showed me what I had long thought of so much—how much more can be accomplished by taking a true view than by great intellectual energy." A true view of any work is the first requisite to success.

History may be made one of the most fascinating studies for a child, or it may become one of the driest and most uninteresting. If a single text-book is followed and lessons are assigned from day to day, it is not long before the child finds himself so confused by a mass of bare disconnected facts to which numberless dates are attached, that it is impossible for him to retain them, except by the most arbitrary means. The purpose of the work in an intermediate or grammar school should not be to put the child in possession of much history, if the pages of an ordinary text-book are to be taken as a representation of what history is.

History is a record of the lives of people as found in communities, states, and nations. It should portray the conditions of the people, financial, intellectual and social, and should reveal their hopes and their aspirations, their disappointments and their sorrows.

Now, the history of the people, in all its multiplied phases, is contained in books, and the purpose of our work in history is to impress upon the minds of the children that the information we seek is to be found in books.

A second purpose is to train the pupil to discriminate between that which is essential and that which is not essential, or to show him how to use books.

A third purpose, no less important than either of the purposes mentioned above, is to cultivate a desire for reading, and to establish a habit of reading with a purpose in view.

A fourth object of the work is to fix in the child's mind a connected abstract or outline of the representative acts of the communities or states, whose habits and desires he has been studying. To aid in this last work a well arranged text-book may be found very useful.

We may learn something very useful to us in determining how to do this work, by considering the likes and dislikes of the children, even sometimes of children of a larger growth. They are interested in persons, people, not in events. A study of nursery lines will show you that the most prominent characteristic is that of personality. If you repeat to the little child on the mother's lap,—

Jack and Jill went up the hill
To get a pail of water,
Jack fell down and broke his crown—

and stop, the almost immediate cry of the child is to know what became of Jill. The study of Fairy Tales, one grade higher in intellectual growth, reveals the same thing. How often have you seen the tears spring to the eyes of a child upon hearing the story of Cinderella or Little Red Riding Hood. If you inquire the cause of the child's interest in them, you will find as an answer to your inquiry, the personality they portray. One grade higher than the Fairy Tales, we find our boys and girls reading with great eagerness such books as *The Boys of '76*, *The Story of the United States Navy*, *The Life of Miles Standish*, and *The Boys of '61*. I have known school boys who became so interested in such books that they begged to be allowed to take them home to complete, promising great care and a safe return of the same; and an examination, later, proved that they not only read the books understandingly, but with an object in view. The habit which so many readers of novels of a lower order acquire, of reading the book simply for the plot, can be accounted for by the same philosophy.

These facts only prove the value and wisdom of the law which was given us in our first attempts at teaching a primary school—lead from the concrete to the abstract. A little thought will convince one that the outlines of history as found upon the pages of a common text-book—a single book can contain but an outline—gives results only. These are so broad and general that they are to the learner little more than abstractions.

Let us lead the children to read about the lives and habits of the people about whom we would have them know, and for this purpose we will select representative men. In our own land it is especially true that the leading men are representatives of every phase and condition of their nationality. From the news-boy to the railroad king, from the boot-black to the senator, from the log cabin to the supreme bench, from the canal boy to the ruler of the nation, suggest, each in its own line of growth, the grades of American life from the very lowest to the very highest.

Let us take child-life as we find it, minister to it according to its own natural inclinations, and in regular gradation after the nursery lines and fairy tales, give it for its gratification the fascinating incidents in the lives of men who represent the peoples of the world and the marvelous events of communities. A study of the lives of Washington, Franklin, and Lincoln, with a few others in different departments of life, is a study of the American people, and if presented in proper form and true gradation will prove as interesting to the pupils as the beautiful story of Cinderella or that of the growth of the wonderful bean. For if it be false that truth is stranger than fiction, it is true that truth may be made more interesting than fiction, when it is given in connection with persons whose interests are common with our own.

A young friend and myself have been reading Schiller's Marie Stuart, and in connection with it, have read the history of the times of Queen Mary. When speaking about history a few days ago my friend said, "In school I made the study of history a mere matter of memory, and soon forgot what I had learned. It was not interesting to me, and I learned it by mere force of will. I have been interested in this work, and think I shall never forget the history read in connection with Marie Stuart."

My friend committed to memory an outline of results, which, because the circumstances leading to these results were wanting, were mere abstractions. Had she studied the history of the people and become interested in their successes and their failures, the outline even would have been interesting to her because it would have suggested all the life for which it stands, and she would easily have remembered such an outline.

No thrilling adventure of the frontier life of *Buffalo Bill* has more fascination for the child than the Boston Tea Party or the perilous journey of Washington to the French commander—a journey without military escort through an almost unbroken wilderness, in which he was exposed to the dangers of hostile Indian tribes, of bridgless streams swollen by autumn rains, and of treacherous guides; and the child admires no more the bravery of the hero of the dime novel, who endangers his life for the heroine, than that of Patrick Henry, who by using his bold eloquence against the Stamp Act, the act imposing tax on tea, risked his life for his country. What can be more interesting to the child than the Parson's Cause, linked with the study of Patrick Henry, and farther along in the work the Dred Scott Case, studied in connection with Lincoln's life, provided these occurrences be given in narrative and be brought within the comprehension of the child, and also be properly connected with the person whose life he is studying.

How much history of our country the child may fasten by studying it in connection with the life of George Washington.

Another portion of the history of our country may be grouped about the life of Abraham Lincoln.

Thus the life of Washington represents a portion of the history of our country that may be studied with profit and interest apart from any other history, and may be taken as a term's work, a year's work, or two years' work; and the same may be said of the life of Lincoln. And in the same light the life of Columbus may be taken as the representative of the discovery and settlement of the country.

There are other phases of history, other departments of life, other interests showing the growth of the people. With each of

these some one or more men stand as the representatives, and each life is more interesting than a fairy tale. When we behold the steam engine drawing its load of precious freight across the continent, or when we stand at the telephone and converse easily with our friend who is forty, sixty, or one hundred miles away, we may truly say that the results of such lives are more wonderful than Aladdin's Lamp or any of the tales of the Arabian Nights.

To complete or balance our outline or framework, the lives of many prominent men in the various departments of life suggest themselves. The history of the art of printing, the rise and growth of the newspaper, magazine, and the great new world of books, and the influence that this life of letters has had upon the civilization of the world, and particularly the development of our own land, may be learned from the lives of Benjamin Franklin, Horace Greeley, and perhaps a few of their contemporaries. The application of steam to navigation, and the great influence this event has had on the nation, may be studied with the life of Robert Fulton. Our railway locomotives, their effect on civilization and commerce, and the great advantages arising therefrom, may be studied with the life of George Stephenson. Telegraphy may be studied with the life of Samuel Morse, and the great Atlantic Cable with that of Cyrus Field.

By a study of the lives of a few men as indicated, a fair outline or framework of the history of our country may be found, to which correlative reading may be intelligently added, or rather this outline will serve as a guide for correlative reading.

These books that are put into the hands of the child must be of the kind that can be easily handled by him. If he is obliged to read from a half dozen to a dozen pages to obtain one or two facts, his interest is lost and the object of the work not accomplished. It is this that makes the child avoid Washington Irving's *Life of Washington*, and select in place either Bancroft's or Abbott's work.

In all of this reading the teacher must guide or direct the pupil so that there may always be an object or purpose to his reading. Definite questions or topics should be assigned, about which the

child is to obtain all the information he can. To illustrate, if the life of Washington is being studied, the pupil may be asked to obtain by a certain time, a knowledge of the condition of the people with whom his childhood was spent, or he may be asked to find the facts concerning his educational advantages, etc. The work of the teacher in class time should be to lead the pupil to discriminate between that which can be applied to the question and that which can not, to fix the order of results or main points into outline or framework, and to open up the subject, keep it unfinished, and to create a desire for more study.

The reading in the line of geography has been provided for by the use of *The Travels of Bayard Taylor*, *Zigzag Books*, *Wonderful City of Tokio*, *Our Boys in India*, *Rip Van Winkle's Travels in Foreign Lands*, etc.

As early as the sixth grade, the pupils read *Miles Standish*, *Evangeline*, *Hiawatha*, instead of the ordinary reading-books, and in the seventh grade *Christmas Stories* by Dickens, and selections from Whittier, Longfellow, or Bryant. In the eighth grade two or more plays of Shakespeare, and perhaps *Marmion* or *Lady of the Lake*, or both, from Scott are read.

These are studied as carefully as is possible by pupils of these grades.

This reading furnishes much material for composition, both oral and written, in giving outlines of plots, word pictures of characters, comparisons of characters, etc. By means of the work last alluded to, the pupils are brought to a fair understanding of what they are doing.

In addition to the three regular lines of reading—geography, history, and literature, the reference tables are furnished with books graded to the capacities of the children, treating on animals, plants, physiology, laws of health, physical experiments, effect of tobacco, spirituous liquors, elementary designing, modeling, cruelty to animals, domestic economy, civil government, and story books by Scott, Dickens, and Hawthorne. Much of this reading is tributary to, and indeed induced by our elementary work in zoology, botany, physiology, and physics. Other

portions of it help in drawing and modeling, and other portions are tributary to the geography, as the books on government and those explaining the processes of coal and iron mining, glass-making, etc.

Pupils must have reading books before they are introduced to reference books; books containing extracts are not reading books in any true sense.

The higher readers are filled with extracts, which when isolated are not as easily understood as the article from which they are taken, and in many cases they can not be read intelligently, except by an understanding of their relation, and this can not be had except by reading entire articles.

One does not learn to know or to love books, to know or to admire authors by reading extracts, the relations of which he knows nothing about. Consider the number and the variety of authors represented in a single Fourth or Fifth Reader, and then say, if you will, that it is less difficult to read than *The Barefoot Boy*, *Hiawatha*, or *Evangeline*, and these are more difficult than the first reading I have suggested to succeed the Third Reader.

The public library of every city should have a branch in each school. That branch should contain, not reference books—the pupils of the upper grades will go after the reference books they need if they have been properly trained below—but reading books graded and distributed from the lowest to the highest. These are the rounds in the ladder by which the pupils can climb to the reference books found in the high schools or the city libraries. Unless these rounds are furnished by some authority the mass of pupils who leave our schools will read the dime novel and the *Police Gazette*.

The public library must become a part of and auxiliary to the public school, but the points of union must not be alone the high school or upper grammar grades on the one hand and books of reference on the other. It must be all, and especially the lower grades of the school on the one side, and useful, interesting and properly graded reading matter on the other side. The public library must be wedded to the public school, and the wooing must begin in the primary grades.

If there were no library in my school and I had but a limited

amount of money to expend for books, I would not purchase a cyclopedia or a gazetteer, or shall I say it, a dictionary. I would buy appropriate reading books for the lower grades of the school.

THE STUDY OF THE TEXT IN GEOGRAPHY.

BY J. J. MILLS.

[Mr. Mills, who is Assistant Supt. of the Indianapolis schools, recently discussed with all the teachers of the city who have advanced classes in Geography, the best methods of teaching the subject from text-books. His plan was so excellent that he was asked to put it into definite form for publication. The following article is the result. The questions are good for any text-book. The *references*, of course, will have to be modified to suit the text-book in use: this can be done by any teacher —ED.]

"THE great conspicuous evil practice in our schools, once almost universal, and still widely prevalent, is that of obliging pupils to commit to memory the words of the text-book." The teacher assigns a certain number of inches of the column or page as a lesson. In the mind of the pupil the lesson is prepared when every word is committed to memory, and not until then. At the recitation the teacher asks questions involving as nearly as possible the statements made in the text. The pupil relies upon some catch-word, or some association of position or appearance upon the page to suggest the right words to constitute an answer. If he succeeds in repeating the language of the book (albeit it conveys not a thought to his mind), it is accepted as a satisfactory performance. If he fails, he is again condemned to the task of "committing" the lesson.

The author above quoted cites the instance of a child who was detained after school because she had forgotten a single word in her Geography lesson. "Upon examination the following was found to be the sentence which made the difficulty, and which she and the other members of the class were obliged to repeat: 'The Danubian provinces of Servia, Moldavia, and Wallachia are nominally independent of the Sublime Porte.'" The instance is not a remarkably rare one.

To teach pupils "how to study" should be made a cardinal object of instruction, especially in intermediate schools. Children should be brought to see the difference between study and "learning by rote"—between memorizing words and thinking thoughts. No other line of school work affords a better opportunity for this than the study of the text in Geography.

For illustration, take the chapter upon Europe, in Guyot's Intermediate Geography, and let it be supposed that the class has mastered the map studies as preliminary to the study of the text.

In order that a right standard for the preparation of a lesson may be fixed in the minds of the pupils, let an intelligent and thoughtful reading of the text, and not the recitation thereof, be made for a time the prominent thing. To this end, let the teacher lead the study of the lesson, according to a plan which he has previously prepared. The whole class attending to their books, individual pupils may be called upon in turn to read aloud a sentence or paragraph—the dictionaries of all may be brought to bear upon unfamiliar words—the reader or some other one may express the thought in different language, as many paraphrases as possible being thus obtained—all the class may find upon the map the location referred to in the paragraph read—a map may be quickly sketched upon the blackboard or slate to present the fact more clearly—cause and effect may be traced between facts in the lesson, or a fact in to-day's lesson may be made to recall a fact learned yesterday or last year—comparison and contrast may be made—illustrations may be given from the reading or experience of teacher or pupil—reference may be made to pictures in the text-book or out of it—items may be presented from the newspaper touching upon localities or information mentioned in the text, etc., etc.

At the beginning of the succeeding day's lesson the teacher may ask questions upon the important points brought out in the conversational reading of the preceding day, and then a new portion of the text may be taken up and subjected to similar treatment.

Let the text of the entire chapter be thus read from day to day—thoughtfulness, intelligence, and interest being made of

much greater importance than recollection, and no place whatever being given to verbal memory. When the text of the whole continent has been thus studied, it must then be reviewed for the purpose of fixing information in the memory, and calling the judgment and reason into exercise. In conducting this review the teacher should constantly bear in mind four essential principles, viz.: 1. The pupil must be led to see the text on the map. 2. The text must be reviewed by *topics* and not by *inches*. 3. Comparison must be made (*a*) of facts in European geography, one with another; (*b*) of facts in the geography of Europe with facts in geography of other countries previously studied. 4. Contrasts must be made (*a*) and (*b*) as in 3.

The following questions and exercises afford an exhaustive review of the text above referred to in accordance with the four foregoing principles. The figures following questions refer to page and column, and the letters to the part of the column, in which a statement bearing upon the answer may be found; *t* standing for top, *m* for middle, and *b* for bottom.

I. THE COUNTRIES OF EUROPE.

I. Location.—1. Give the natural boundaries of Low Europe. 69, 1, *b*.

2. Give the natural boundaries of High Europe. (See map.)

3. Name all the peninsular countries of Europe and the waters adjacent to each. (See map.)

4. Name and bound all the countries in the mountain region. (See map.)

5. What countries comprise Low Europe? 70, 1, *m* and map.

6. Which countries have foreign possessions, and what? 70, 2, *t* and *b*; 71, 2, *m* and *b*; 73, 1, *b*; 77, 2, *t*.

7. What European city is directly east of Indianapolis? What point on the coast of North America is directly west of London? (See map.)

II. Surface.—1. Point out on map the natural regions of High Europe? 68, 2, *m*.

2. How does the surface of High Europe compare with the surface of Low Europe? 68, 1, *b* and 2 *m*.

3. Point out the highest portion of High Europe. 68, 2, *m*. (See map.)

4. Point out the most extensive plain of Low Europe. 68, 1, *b*; 70, 1, *m*. (See map.)

5. What fact concerning the region of the lower Mississippi is suggested by the description of Holland? 36, 1, *b*; 73, 1, *b*.

III. Rivers.—1. Name the five rivers of Low Europe rising in the neighborhood of the Valdai Hills. See map, and 68, 2, *b*.

2. Through what countries, and into what waters does each flow? See map, and 68, 2, *b*.

3. Name four rivers of High Europe rising in the neighborhood of the Alps. See map, and 69, 1, *t*.

4. Through what countries, and into what waters does each flow? See map, and 69, 1, *t*.

5. What is the longest river of Europe? Compare it with the Mississippi.

NOTE.—Observe that in this book the map of Europe is drawn to a larger scale than the map of North America.

IV. Climate.—1. Contrast the climate of the Scandinavian peninsula with that of the Italian peninsula, and give reasons for the difference. 69, 1, *m* and *b*; 6, 1, *b*; 6, 2, *t*.

2. Which has more rain, probably, Athens or Kharkov? 69, 1, *m* and *b*.

3. Contrast the climate of England with that of the continental countries of the same latitude, and give reasons. See map; 69, 1, *b*; 76; 6, 1, *b*; 6, 2, *t*.

4. Which has more rain, Madrid or London? Why? 71, 2, *b*; 76; 77, 1, *t*.

5. New York City and Constantinople are on the same parallel; which has the more snow? Why? 69, 1, *b*.

V. Soil.—1. Which has the more fertile soil, Sweden or Turkey? 70, 1, *t*; 70, 2, *m*.

2. Contrast Central Spain as a farming country with Holland. 71, 2, *m*; 69, 1, *b*; 73, 1, *b*.

3. Compare the soil of Denmark with that of the plains of Germany. 73, 1, *m*; 74, 1, *t* and *m*.

4. How do the Belgian plains compare with the plateaux of Portugal as to fertility? 73, 2; 71, 2, *b*; 71, 2, *m*.

5. Point out three European countries adapted to stock raising, and tell why. 70, 1, *m*; 74, 1, *t*; 74, 2, *m*.

VI. *Productions*.—(a) *Minerals*. 1. With what European countries must the United States compete in the production of iron? 71, 1, *t*; 73, 2, *m*; 74, 1, *m*; 74, 2, *m*; 75, 1, *b*; 77, 1, *t*.

2. Name five European countries which have copper mines, and state where our supply of copper comes from. 70,

2, *m*; 74, 1, *m*; 74, 2, *m*; 77, 1, *t*; 45, 1, *t*.

3. Which European countries and which American States produce lead? 74, 1, *m*; 74, 2, *m*; 77, 1, *t*; 44, 2, *t*; 45, 2, *b*; 46, 1, *m*.

4. Point out the coal regions of Europe and of this country.

73, 2, *m*; 74, 1, *m*; 75, 1, *b*; 31, 2, *m*; 32, 2, *m*; 33, 1, *t*; 37, 2, *t*; 43, 2, *m*; 44, 1, *m*; 45, 2, *b*; 46, 1, *m*.

5. Where is zinc found? 31, 1, *b*; 73, 2, *m*; 74, 1, *m*.

6. Where is rock-salt obtained? 74, 2, *m*; 52, 1, *m*. Why rock-salt? Where does the salt supply of this country come from? 31, 1, *m*; 42, 2, *t*; 43, 2, *m*; 45, 1, *t*.

7. Where is tin obtained? 77, 1, *t*.

8. What European countries have gold and silver mines? 70, 1, *t*; 74, 2, *m*.

9. Where is quicksilver found? 74, 2, *m*; 50, 2, *m*. Why quick-silver?

10. Point out on the map six great mineral regions of Europe.

11. How do you account for the location of the five great manufacturing cities of England?

(b) *Trees*. 1. Name the countries of Europe noted for their forests. 69, 2, *m*; 70, 1, *t* and *m*; 71, 2, *m*; 73, 2, *m*; 74, 2, *m*.

2. Point out the forest regions of Europe upon the map.

3. Which countries have cone-bearing trees? Why? 69, 2, *t*.

4. Which countries have deciduous trees? 69, 2, *t*.

5. In what countries are fruit trees green all the year? 69, 2, *t*.

6. What valuable tree peculiar to Spain? 71, 2, *m*.

7. Why is the mulberry an important tree in Southern Europe? 75, 2, *t*.

(c) *Agricultural and Manufacturing Products*. 1. Point out five European countries which produce wool extensively. 70, 2, *m*; 71, 2, *m* and *b*; 74, 1, *m*; 77, 1, *t*.

2. Point out five wine countries. 71, 2, *m* and *b*; 74, 1, *m*; 74, 2, *m*; 75, 2, *t*.

3. One corn country. 75, 2, *t*.
4. Three hemp countries. 70, 1, *m*; 71, 1, *m*; 74, 1, *m*.
5. Five flax countries. 70, 1, *m*; 71, 1, *m*; 74, 1, *m*; 74, 2, *m*; 77, 1, *t*.
6. Six silk countries. 70, 2, *m*; 71, 1, *t* and *b*; 71, 2, *m* and *b*; 75, 2, *m*.
7. What production is common to South Carolina and Italy? 37, 1, *b*; 71, 1, *m*.
8. To Virginia and Turkey? 32, 2, *m*; 70, 2, *m*.
9. One of the United States and a country of Europe are noted for their dairy products. Name them. 30, 2, *b*; 73, 1, *b*.
10. What European countries produce orchard fruits? 74, 1, *m*; 75, 2, *t*; 77, 1, *t*.
11. What extensive use is made of the beet in France? 75, 2, *t*.
12. With what countries must the United States compete in the manufacture of iron? 73, 2, *m*; 77, 1, *t*.
13. Would a season of great drouth throughout Southern Russia affect the price of wheat in Chicago? Why? 70, 1, *m*; 70, 2, *t*; 77, 1, *m*; 21, 2, *t*.
14. Would a prolonged strike amongst the operatives of the factories of Manchester, England, affect the interests of a planter in Mississippi? How, and why? 38, 1, *t*; 77, 1, *m*.
15. What European exports might you find in a drug store; and from what country is each obtained? 70, 2, *m*; 71, 2, *m*; 74, 1, *b*; 77, 1, *b*.
16. In a fancy grocery store, etc.? 69, 2, *t*; 71, 1, *t* and *b*; 71, 2, *m*.
17. At a fruit stand, etc.? 69, 2, *t*; 71, 1, *b*; 71, 2, *m*.
18. At a hardware store, etc.? 73, 2, *m* and *b*; 77, 1, *m*.
19. At a dry goods store, etc.? 71, 1, *b*; 71, 2, *m*; 73, 2, *m* and *b*; 75, 1, *m*; 75, 2, *m* and *b*.
20. At a queensware store? 74, 2, *b*.
21. Why are all the great fruit markets of Europe south of the mountain region, while all the great grain markets are north?

II. CITIES OF EUROPE.

NOTE.—The required information in the study of the cities is easily found without the aid of references.

1. Name and point out on the map all the capital cities of Europe.

2. Name and locate eight cities of the continent noted as seats of learning.
3. Three noted for great libraries.
4. Two noted for trade in books.
5. Five noted for museums and art galleries.
6. Ten noted for something in their past history.
7. Name and locate a manufacturing city of Russia; of Turkey; of Spain. Three of Belgium, naming articles manufactured in each. Five in England. One in Ireland.
8. In what respect are Valencia, Zurich, and Lyon alike noted?
9. In what four cities is ship building an important industry? Point them out.
10. For what are Athens and Rome alike noted?
11. What city is noted for the manufacture of jewelry? Of astronomical instruments? For diamond cutting?
12. Describe London.
13. In what respect is the trade of Odessa, Konegsberg, Dantzic, Szegedin, Chicago, and Milwaukee alike?
14. Valencia, Messina, Sevilla, Jacksonville, and San Jose are alike noted for what?
15. What city is noted for its trade in wool, and what one for its manufacture of wool?
16. Compare Pittsburg and Birmingham.
17. How are St. Etienne and New Castle like Scranton and Pittsburg?
18. Name a city of England and one of the continent of Europe noted for the same line of manufacture as Manchester, N. H.
19. Springfield, Mass., is like Liege in what respect?
20. Name and locate fifteen commercial cities of Europe.

III. GOVERNMENT. (See pp. 10, 11, 23, 69 and 77.)

1. What name is given to the sovereign of Russia? Of Turkey?
2. How does the sovereign of Russia obtain his office? Of Switzerland?
3. Name two countries of Europe in which popular elections are held for the selection of rulers.

4. How does the government of Great Britain differ from that of the United States?
5. What kind of government has Belgium? Greece? Germany? Spain?
6. What are the German "Free Cities?"

IV. PROMISCUOUS QUESTIONS.

1. Which European nations encourage learning?
2. Which have the finest natural scenery?
3. Which afford the best opportunity for the study of art?
4. Which country has volcanoes?
5. Which has the highest mountains?
6. Which have fine lakes?
7. Which is most cut up by the sea?
8. Give two reasons why Italy is such a famous resort for sculptors.
9. In what three respects are Italy and Greece alike?
10. What country exports ice?
11. Which countries have fur-bearing animals?
12. Which have valuable fisheries, and in what waters?
13. What is Syria, and for what is it noted?

ESSAYS.—Write essays upon the following subjects: The Reindeer; Glaciers; The Silk-worm; Herculaneum, and Pompeii.

PRIMARY DEPARTMENT.

[This Department is conducted by LEWIS H. JONES, Prin. Indianapolis Training School.]

PRIMARY NUMBER.

BUSINESS MEN complain that our schools do not prepare pupils for business life, even in the simple rules of arithmetic, and teachers generally agree that too much time is given to that subject. Book-keepers of large experience find addition the most tiresome and difficult part of their work, and teachers, after years spent in teaching addition, add slowly, with difficulty, and with frequent errors. Addition enters so largely into all mathematical calculations that one must learn to add rapidly and

accurately to be skillful in any calculations, and though practice gives skill in performing, the skill acquired by adding a single figure at a time, according to the usual method, is not at all commensurate with the time given to it.

It is the object of this paper to show that figures may be read in the same way we read words. Twenty years ago children were taught to read by putting single letters together to form a word. To-day they are taught the word at once. Instead of c-a-t cat, a child learns to see the word instead of the letters.

We have only to apply this familiar principle to figures, and the gain will be even greater in adding than in reading; and it can be as easily taught to children just beginning to add as can the word method to children just beginning to read.

As soon as the pupils have learned to add by counting and the use of things, and the name and order of the digits 1-9 inclusive, have them make and memorize the following table:

$\begin{smallmatrix} 1 \\ 1 \end{smallmatrix} = 2$	$\begin{smallmatrix} 1 \\ 2 \end{smallmatrix} = 3$	$\begin{smallmatrix} 12 \\ 32 \end{smallmatrix} = 4$	$\begin{smallmatrix} 12 \\ 43 \end{smallmatrix} = 5$	$\begin{smallmatrix} 123 \\ 543 \end{smallmatrix} = 6$	$\begin{smallmatrix} 123 \\ 654 \end{smallmatrix} = 7$	$\begin{smallmatrix} 1234 \\ 7654 \end{smallmatrix} = 8$
$\begin{smallmatrix} 1234 \\ 8765 \end{smallmatrix} = 9$	$\begin{smallmatrix} 12345 \\ 98765 \end{smallmatrix} = 10$	$\begin{smallmatrix} 9876 \\ 2345 \end{smallmatrix} = 11$	$\begin{smallmatrix} 3456 \\ 9876 \end{smallmatrix} = 12$	$\begin{smallmatrix} 987 \\ 456 \end{smallmatrix} = 13$		
$\begin{smallmatrix} 567 \\ 987 \end{smallmatrix} = 14$	$\begin{smallmatrix} 67 \\ 98 \end{smallmatrix} = 15$	$\begin{smallmatrix} 78 \\ 98 \end{smallmatrix} = 16$	$\begin{smallmatrix} 8 \\ 9 \end{smallmatrix} = 17$	$\begin{smallmatrix} 9 \\ 9 \end{smallmatrix} = 18$		

Each day make as much as can be easily memorized, and review all that has been learned. Practice until the pupils can instantly name the sum of any two figures, one above the other, and will as quickly see 9 in $\begin{smallmatrix} 5 \\ 4 \end{smallmatrix}$, $\begin{smallmatrix} 6 \\ 1 \end{smallmatrix}$, $\begin{smallmatrix} 7 \\ 2 \end{smallmatrix}$, etc., as in the single figure 9.

There are but forty-five combinations (in pairs) of the nine digits, and when the sum of any pair can be seen, as readily as a single figure, we are ready for the second step, which is to use that sum as a syllable and add it to another syllable, or sum, of two figures; and thus by one calculation we have the sum total represented by four figures.

E. g. $\begin{smallmatrix} 1 \\ 4 \end{smallmatrix} = 3 = 10$ $\begin{smallmatrix} 3 \\ 4 \end{smallmatrix} = 4 = 10$ $\begin{smallmatrix} 4 \\ 5 \end{smallmatrix} = 5 = 10$ $\begin{smallmatrix} 6 \\ 2 \end{smallmatrix} = 9 = 15$ $\begin{smallmatrix} 8 \\ 2 \end{smallmatrix} = 8 = 16$ $\begin{smallmatrix} 7 \\ 2 \end{smallmatrix} = 7 = 12$

Practice adding the sums of the pairs the same as single figures are usually added. In adding the above the child should say, "seven"—"ten"; "six"—"ten"; "six"—"fifteen"; "eight"—"sixteen"; "five"—"twelve".

The pupil has learned to see the sum of any two figures at sight. That sum may exceed 10, (i. e., be a teen). When it does he should be taught to see the unit figure of that sum and know that it is the unit figure of a teen, and that every teen has a ten. This will enable him to add the units and count the tens.

E. g. $\begin{matrix} 8 \\ 7 \end{matrix} = 11$ $\begin{matrix} 6 \\ 7 \end{matrix} = 13$ $\begin{matrix} 5 \\ 7 \end{matrix} = 12$ $\begin{matrix} 4 \\ 7 \end{matrix} = 11$ $\begin{matrix} 3 \\ 7 \end{matrix} = 10$ $\begin{matrix} 2 \\ 7 \end{matrix} = 9$ $\begin{matrix} 1 \\ 7 \end{matrix} = 8$

In the above the pupil sees $\begin{matrix} 8 \\ 7 \end{matrix}$ as 15 and $\begin{matrix} 6 \\ 7 \end{matrix}$ as 11, and has learned to see the unit figure only, of the teens 15 and 11; so he may now add the unit figures 5 and 1 and know that he has a ten for each unit figure, and in adding the column given should say "five"-
"twenty-six"; "four"-
"twenty-six", etc. When the added unit figures make a ten he knows there will be three tens, and will read, "six"-
"thirty-three"; "eight"-
"thirty-three", etc.
E. g. $\begin{matrix} 1 \\ 1 \end{matrix} = 33$.

Third Step—Column Addition. Before taking this up, practice counting by twenties, viz.: 13-33-53-73; 17-37-57-77-97; 26-46-66-86.

We have now only to apply to a column of figures what we have already learned:

E. g. $\begin{matrix} 100 \\ 4 \\ 1 \\ 2 \\ 5 \\ 5 \\ 3 \\ 4 \\ 2 \\ 1 \\ 8 \\ 5 \\ 1 \\ 3 \\ 7 \\ 1 \\ 25 \\ 4 \end{matrix}$

We see a ten or teen and think the unit figure, to which add the unit figure of the next teen. We know that we advance one ten at each addition, as we always take figures enough to make a ten; and when the unit figures of the sums added together equals ten or more we have another ten, and so advance two tens.

At first the pupil may read the above column, four plus one is twenty-five, plus two is thirty-seven, plus one is forty-eight, and so on; but he will soon read it fourteen, twenty-five, thirty-seven, etc., the same as when adding single figures.

The brackets and figures to the right of the above column are inserted here merely for the purpose of illustration, and should never be written out except for that purpose. The amount added should be carried in mind as in single figure adding.

We have spoken of children only, as it is with them this system has been tested, and because if children from seven to ten years of age can easily learn to add rapidly and accurately by this method, *a fortiori* adults can do so.

Those who have tested the method say they have gained 100 per cent. in accuracy and rapidity.

With one-half the practice usually given to single figure adding the gain will be very much greater, for one has so memorized all combinations that he sees the sum as rapidly as the eye can form the groups used.

There are but forty-five combinations of the digits in this method (through second and third steps, teachers have to use these combinations); for this reason, addition is much more readily learned than by the old, or single figure method, which contains nine hundred combinations.

By one method we learn to *see sums*, by the other, figures. By one method we see $\begin{smallmatrix} 5 \\ 9 \\ 7 \\ 6 \end{smallmatrix} \left\{ \begin{smallmatrix} 4 \\ 3 \end{smallmatrix} \right.$ is 27, viz., 3-27. By the other we see 13, 22, 27. By one method we add at sight, since but one calculation is required for any four figures. By the other three calculations are required to add four figures. No one can make three calculations, or even two, at sight.

Those who have tested this method, claim that they can add 100 per cent. more rapidly and accurately than before learning it. We hope all will learn and test it, before deciding upon its practical value.

Its use in the school will save about one-half of the time now devoted to arithmetic, and prepare for business life.

F. B. GINN,

180 Wabash Ave., Chicago.

PRIMARY READING.

THERE are three distinct methods of teaching to children the preliminary steps in primary reading, commonly recognized by the more thoughtful of our teachers. Each of these methods has had in the past enthusiastic adherents, who believed it to be

better than either of the others. In more recent times it has been seen that no one of these alone is complete, but that each is rather a phase or step of a larger, more liberal method, which supplements the deficiency of each by the help of the others. This method, composed of *selected steps* or processes from the three, may be called the *eclectic* method.

The eclectic method, then, has three phases, or minor methods; viz., the word-method, the phonic-method, and the a-b-c-method. In order that a teacher may blend these into a consistent whole, she must first understand each in itself, so that she may intelligently select what she may need at any moment, from whichever one of these methods will best supply the needed process. This paper will be devoted to a discussion of the nature and uses of the word-method, and subsequent articles may then treat the others in order.

The word-method supplies the first processes needed in the instruction, and is, therefore, the first used in the national order of teaching. This will readily be seen by the descriptions and illustrations which follow, and does not need proof now.

The word-method teaches *words as wholes* to the eye, *words as wholes* to the ear, and the meaning of *words as wholes* to the understanding, before the other methods are called to teach either the names or the sounds of the individual letters composing the words so taught. It is important that words be taught as wholes to the eye, and that the meaning of the words as wholes be taught to the understanding before the pupil is required to analyze either the printed word into its printed letters, or the spoken word into its elementary sounds. If he be taught to see the word as a whole, he may be made to recollect or recognize it *at sight* whenever it occurs in his reading work. Thus he need not dwell on the closing sound of one word while he analyzes the next word in order to determine what to call it. If he knows it, he knows it *at once*, i. e., *at sight*. Especially if the meaning of the word as a whole has been clearly and impressively taught, the pupil can read *without drawling*, the simple sentences whose words he has learned by the word-method. When the habit of natural, conversational reading has been thus established it is

necessary to take up the other methods to make the pupils self-helpful.

First, then, the word-method. Take a simple word, as cat, since this word occurs in all primary readers, and make it the basis of the first exercise. Secure a good picture of a cat, and show it to the class, asking each what the picture makes him think of, as soon as he sees it. He will reply, "A cat," "A real cat," "A live cat," etc. It is important that the imagination of each child interpret the *natural* sign, the picture, as a basis for a like quick and lively interpretation of the *artificial* signs, the printed and oral words.

By a question set pupils to thinking in what other way you could make them think of a cat than by showing them the picture of a cat. There are really many ways, as speaking the word cat, mewling, etc., etc. If pupils do not readily determine, do not allow them to guess, but say, "Listen, what did you hear?" (the teacher having in the meantime spoken the word cat plainly). Each child can tell. He can also tell what it makes him think of, as soon as he hears it. Tell pupils you know still another way of making a person think of a cat, and that you will now show them. The work has now become a kind of game, and each child is anxious to know of the new way. The teacher is now ready to refer to the printed word cat, on a chart, or on the blackboard where she has printed it. She may say very plainly and distinctly, "This is the word cat." "What did I say this is, Jimmie?" Jimmie replies, "The word cat." So with other pupils. The teacher should have the word printed plainly in different places, and on different boards, in different parts of the room, and always in a miscellaneous collection of words. The practice of looking closely for it in a miscellaneous collection, gives the necessary interest, and the opportunity for that comparison and contrast so necessary to perfect memory. Each pupil at the call of his teacher, comes forward, finds the word, and recites as follows: "I have found the word cat;" or, "This is the word cat;" the teacher varying the question in order to secure the variety of answers.

When the word has been drilled upon sufficiently in this way,

say distinctly, "When you see this word cat, you must always think of a real cat." After this is made entirely plain, have pupils find the word again, and recite, "This is the word cat. When I see the word cat I must always think of the real cat."

If this work be done in an interesting way, and the drill in searching for the word be strong, there is not the slightest danger that any pupil will forget either the word at sight, or its meaning; and the method here indicated is easily modified so as to serve for the teaching of any noun. Directions for the next steps will be given in the next paper.

Dr. Samuel Johnson said, "Attention is the mother of memory." Rev. Joseph Cook, in commenting on the saying of Dr. Johnson, remarked, "Yes; but interest is the mother of attention. Therefore, if you would make sure of memory, you must secure both the mother and the grandmother."

DEPARTMENT OF PEDAGOGY.

This Department is conducted by GEO. P. BROWN, President State Normal School.

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CHARACTERISTICS OF A GOOD QUESTION.

1st. *It is clear.* A question is clear when it separates the matter sought in the answer from everything else. There is no doubt in the mind of the person questioned as to what is wanted. A clear question affords no excuse for a vague and indefinite answer. The tendency of such a question is to promote definiteness of thinking, and hence a definite answer. "Why are some lakes salt?" is a clear statement of a question. "What can be said about some of the lakes of the Rocky Mountain region?" is not a clear question. Many different things may be said about them. There is nothing in the question that will direct the mind to the particular thing desired. When in the midst of the discussion of a topic the mind is dealing with a certain group of ideas, and there is no danger of being misled, questions that would at other times be vague can be tolerated.

This is because under such circumstances a very slight suggestion will direct the mind to the idea sought.

Clearness demands that the words employed in the question be such as both the questioner and the questioned will understand alike. More effort is sometimes required to interpret the meaning of the question than to answer it. The language of the question must be familiar to the pupil.

Want of clearness, therefore, arises from two causes: One is the vague form of the question, making it equally applicable to two or more different answers. In the other case the question may really be clear, but the terms employed are those with which the pupil is unfamiliar, and for this reason he has no adequate apprehension of it, and it is, therefore, not clear to him.

2d. *It is short.* Long questions are faulty in that they involve too many ideas, and thus become confusing. A good question aims directly at a single idea or thought at short range. A long question results from a too distant view of this idea or thought. Standing too far away from it causes a multitude of other ideas to intervene, which the questioner must consider, and to which the question must refer. Each of these ideas should be disposed of by a separate question, and thus both teacher and pupil come into close contact with that which is sought. The following is a somewhat exaggerated example: "Lakes being formed by water flowing into the lower places, and some of these basins being so large that no outlet is required, why will the water in these lakes become salt?" The questioner has taken his stand at the general cause of lakes, and by a single question attempts to pass over the intervening distance to the cause of the saltiness of a particular class of lakes. Unless the pupil has passed over this route so often that it is very familiar to him, he will be apt to get lost before he reaches the thought which the teacher is asking for.

This long question, with its various assumptions of knowledge, needs to be separated into the shorter ones that are included in it, as follows:

"When rain falls upon mountains and highlands, where does the water flow? What would cause this water to form a lake?"

Would this lake necessarily have an outlet? If not, why not? What would cause it to become salt, in case it had no outlet? In what case would it continue as a fresh-water lake Why?"

There may be a stage in the instruction where involved questions are admissible, but it is not in the elementary stage.

3d. *The question should prompt to a full and complete answer.* He is an artist whose question invariably meets this requirement. A clear and brief question that makes the pupil feel dissatisfied with anything less than a full and complete answer is an educational influence of inestimable value. It is not easy to describe such a question so that one shall be able to construct it from its description. This characteristic is felt rather than seen. The question strikes at the core of the matter instead of the surface, and in such a way as to inspire the student with the desire to tell what immediately surrounds and makes what is called for, the core of the matter. Such questions can be asked only by those who see clearly the nucleus, the pivotal point, the central element of the complex thing which the question calls for. Those who do not see this will question as earnestly for the unimportant as the important elements. What are made equally prominent by questioning are apt to find lodgment in the mind of the learner as of equal importance. Many ideas are simply the fringe, as it were, of others, and when given equal importance tend to confuse the mind of the learner as to the relative value of knowledge. These nuclei are the germinal elements, the germ, of which the attendant ideas are the husk, or at most that part of the seed which affords nutriment to the germ. The mind is such by nature that if fairly dealt with it will seize upon and develop these germs, but if unfairly dealt with by making what is germinal and what is merely attendant or accidental of equal value it loses interest in all.

Many conscientious teachers become slaves to a false idea of thoroughness which would elevate the small and unimportant to the level of the great in their instruction, and thereby defeat their purpose of thoroughness.

It is the question that most effectually emphasizes the important idea. It is by the question that the most effective instruction

is given. It is far better that the less important ideas should be told directly or assumed than that by undue emphasis the child should be led to rank them with the others.

4th. *The question is not leading.* A leading question is one that by its form or matter suggests the answer sought. The accident of its admitting the answer "yes" or "no" is no mark of such a question, though that notion is prevalent among teachers. "Is London the capital of England?" is not, therefore, a leading question. If objected to, it must be on other grounds. "Is not Paris the capital of France?" is a leading question, since it suggests what answer is desired.

Questions may be leading either in their matter or their form. The example last given is one of a question leading in form. Many questions not leading in form are given the character of leading questions by a peculiar intonation of voice or emphasis that suggests the answer.

There may be many kinds of questions that in their *matter* lead up to the answer desired. They suggest the answer more or less directly, and are therefore less or more tolerable.

An exaggerated example of this kind of question is the following:—

"Since the Atlantic Ocean lies between England and America, by what mode of travel would one go from one country to the other?" This question tells so much that scarcely any knowledge other than that given by it is needed to give the answer required. There is nothing in the form of the question that suggests the answer. It is leading in that it contains within itself its own answer.

Few would ever ask quite so absurd a question, and yet there is not a little of our catechising that gives a hint more or less broad of the answer sought. Such questions are not to be wholly condemned. They have their place. But the teacher should never mistake them for test questions.

The leading question has its uses. When the mind of the pupil is to be led up to some new thought by a new road it is often better to do it by a series of leading questions than to tell him directly what you wish him to see. Better, because the question

has a tendency to arouse the mind from a state of passive attention to that of active attention. The form of the leading question is admissible in cross examination. It is good for testing the degree of certainty of the pupil's knowledge. In this case the questions generally lead from the true answer rather than towards it.

There is a species of leading questions that present an alternative between two things. For example, "Are Indians white or copper-colored?" The pupil may know they are not white, but may not know their color, and yet make a correct answer. Such questions tend to deceive both teacher and pupil by an appearance of knowledge not possessed. They also stimulate the child's propensity to guess.

G. P. B.

HOW TO GOVERN THE BOYS.

THIS is the unsolved problem with many teachers. We do not hope to solve it, and shall be amply repaid for this effort by the consciousness of having suggested some conditions upon which its solution must be based. The boy is governed in the sense in which we are using the word here, when he yields obedience to the laws of the organization of which he is a part,—viz., the school. The government is of the highest type when he yields that obedience cheerfully and without compulsion,—when his conduct is self-regulated. But this is an unrealized Utopia in the realm of school teaching. When realized there will be little need of the school-master. The fact is that the typical boy must be governed largely by influences from without.

But a prime condition of his easy government is that he see the reasonableness of the obedience required. When a boy is old enough to be hard to govern he is old enough to have convictions. Those convictions must be brought over to the side of the school-master. He must see that the requirements are not the arbitrary commands of the teacher, but that they inhere in the school itself. That the purpose for which the school is instituted involves within it the laws to which each part of the school must yield obedience. There are certain laws to which

the teacher must be obedient. He is as much subject to the law of the school as the pupil. He discovers and states these laws, but he does not make them. This is an important thought, and when properly understood tends to bring both teacher and pupil into closer sympathy.

Having shown the reasonableness of the requirements, and thereby won the boy's convictions to the side of obedience, it is important that he have a fair chance when viewed from his own stand-point. The teacher must, in this, stand upon the boy's plane and adopt such methods for the enforcement of laws as shall commend themselves to the boy's sense of justice. When he sees that the requirement is natural and not artificial,—that is, that it inheres in the nature of the school and is not something which the teacher has made,—and that fairness and justice are the governing principles in its execution, he will be easily governed. ● These two allies working within, and reasonable watchfulness and decision on the part of the teacher, will secure ready and cheerful obedience when the mental atmosphere is clear of storms and there is enough work to do. But in the torrent and tempest of passion something more is needed.

The average boy admires decision. It suggests power, and he is a great worshiper of power. For weakness, either mental or physical, he has only contempt. But power which so manifests itself that he recognizes it, awes him.

He also admires courage, especially moral courage. He respects much more the teacher who will pleasantly but persistently say "no" when that is what he ought to say, than him who can be wheedled into saying "yes" when he ought to say "no." To deny requires courage; how much, he knows best who has resisted the appeals of pupils that he loved.

Our boy hates sham, or cant or pretense. When he detects these in his teacher they color all of the teacher's actions.

He has a well defined code of honor which the teacher must respect. He will endure any amount of punishment before he will inform against a comrad. The boy who has not been injured by bad treatment will tell the truth in regard to his own misdeeds, unless he is inherently mean, but he will stop there. It is his

highest conception of honor, and should be respected. He does not see that it is best for the offenders and for all that those who offend should be brought to justice. And not seeing this, if compelled to inform he is forced to act dishonorably and is conscious of meanness and cowardice in yielding obedience.

That a boy has this sense of honor is encouraging. It is the beginning of that higher sense of honor which education is to develop. The boy appreciates being treated with respect and as a gentleman. However disrespectful himself, he admires and is gratified by respectful treatment from his teacher.

The teacher must meet the boy upon his own plane, but it is not meant by this that the teacher is to be a boy. He is to remain the teacher always, whether in school or out of school. The notion that the teacher-relation is to be put on and off like a coat is a pernicious heresy. He is ever to be the leader of the boy. Out of school his leadership is silent and unauthoritative, but none the less influential.

The boy admires rigid discipline when it is reasonably enforced. He may resist and rebel in moments of passion or overpowering impulse, but he accepts merited punishment without any diminution of respect or love for his teacher, when judiciously administered. That teacher is very much mistaken who expects to win the esteem of the boys by shutting his eyes to faults that they know should be corrected.

The type of school government is that of a monarchy. The teacher discovers, formulates, and enforces its laws. He is greatly helped in the enforcement, as we have said, by securing the conviction of the pupil that what he states to be the laws of the school are such. The teacher has all the responsibility of the monarch. He can not shift this responsibility upon his pupils. They are immature and irrational, and one means of developing them into rational beings, is by enforcing rational conduct.

We remark in this connection that the commanding duty of the teacher is to enforce obedience to the laws of the school. Obedience to righteous authority is the lesson of transcendent importance which the school should teach, especially so since

neglect to teach this lesson in the home is so general. From the rigid family discipline of a century ago, we have passed to the other extreme of little or no parental control. Well meaning people are saying to themselves, "I wish my children to have an easier time than I had. My childhood was one of toil, with little to amuse. I wish my children to have a happier childhood." So the children are allowed to direct their own actions.

It is falsely assumed that a happy childhood can be gained by allowing the child its own sweet will; whereas its happiness can only be secured by rational control of its impulses and caprices. The essential lesson of childhood is obedience. This is the only basis upon which a worthy character can be built.

Our earnest exhortation to every teacher is,—“Govern the school. Secure obedience to its laws.” We have suggested some thoughts that should determine the method. But tyranny is better than anarchy. A hard and unsympathetic control is better than no control. Those whose childhood was subjected to hard and unreasonable exactions, may deprecate the needless severity, but they are grateful for the habits which that rigid discipline compelled them to form.

G. P. B.

THE THEORY OF METHODS IN READING.

THE STAGES IN READING.

THE work in reading in the common schools, may be viewed as consisting of three stages:

1. The preparatory stage.
2. Primary reading proper.
3. Advanced reading.

The first, occupying about the period of the first school year, has for its distinguishing mark this:—

It enables the pupil to embody in script and in print, and to obtain from script and from print, his own ideas and thoughts. To illustrate in regard to the *idea*. The pupil is familiar with the object *pen*, and with its oral name. The presence of the object will at any time suggest the oral name, and the oral name

the object. The advance in knowledge which is to be accomplished by this stage is to lead the pupil to associate first the idea and then the oral name with the word *pen* in script and in print. Moreover, the association of the idea and the oral word with the word in script and in print is to be so thorough, that thereafter whenever word in script or in print is seen, it suggests first the idea and then the oral word. Therefore it is said that the distinguishing mark of the preparatory stage is that it enables the pupil to embody in script and in print, and to obtain from script and from print, his *own* ideas. (The idea is termed his own because it arose in his mind on the presentation of the idea objectively*or by oral language.)

To illustrate in regard to the *thought*. Should the teacher, by work in the class, lead the pupil to form the thought, "The pen is used to write with," and to express it orally, and then lead him to associate the thought and its oral expression with the expression of the thought in script and in print on the board, it would be an example of what is meant when it is said that the first stage enables the pupil to embody his *own* thought in script and in print. If the association of the thought and its oral expression, and the expression in script and in print is sufficiently thorough, whenever thereafter, the expression in script or print is seen, it will suggest first the thought and then its oral expression. In this sense it is asserted that the distinguishing mark of the first stage is that it enables the pupil to embody in script and in print, and to obtain from script and from print, his *own* thoughts.

The distinguishing mark of the preparatory stage is the ground for a general method of procedure as follows:—

1. The expression of *ideas* in script or print. *a.* Awaken in the mind of the pupils the idea. *b.* Place on the board in script or print, in the presence of the class, the word. *c.* Lead the pupils to associate the idea with the word in script or in print. *d.* Lead them to associate the oral word with the word in script or print.

Continue such work with *ideas* until the pupils are all masters of a vocabulary of thirty or forty words in script or print.

2. The expression of *thoughts* in script or print. *a.* Awaken in the minds of the pupils the thought. *b.* Obtain the oral expression. *c.* Place on the board, in the presence of the class, the same expression of the thought in script or print. *d.* Lead the pupils to associate the thought with its expression in script or print. *e.* Lead them to associate the oral expression with the expression in script or print.

Continue such work with *thoughts* until the pupils are masters of a considerable number of sentences in script or print.

3. The change from script to print, if script is taught first. *a.* Place upon the board in script a number of words. *b.* Lead the pupils to associate with them the ideas and the oral words. *c.* Place upon the board the same words in print. *d.* Associate the words in print with the same words in script. *e.* Associate the words in print with their ideas and their oral names.

After several such lessons upon words, similar lessons should be given with sentences.

From this stage forward, print is the form of expression considered in reading, and the pupil is able to talk concerning his reading, or other lessons, either orally or in script—the second great mode of communication in business or society.

The full discussion of this stage will be deferred until the distinguishing mark of primary reading proper, and of advanced reading, have been indicated. HOWARD SANDISON.

✓ THE COUNTY INSTITUTE.

THE reports of county institutes which one often reads in the county paper, or which are furnished the educational journal, seem to indicate that there is no common and clear understanding among school officers and institute workers as to the real objects to be sought in these annual teachers' meetings. The facts set forth in these accounts as the prominent features of the institute, and presumably as evidences of its efficiency, are oftentimes quite consistent with a week's work upon subjects foreign to the legitimate work of the county institute. If the enrollment is large; if the teachers are well entertained; if they are fairly

attentive to the instruction given—whether it be strictly professional matter that is presented, or mere information made interesting by its novelty or by the unique and artistic method of presentation; if the citizens manifest some interest by attending the one or more public lectures upon subjects oftentimes bearing only the remotest relation to the work of the public school, the institute is voted a great success. And yet every one of these conditions may be fulfilled, and the institute, as an institute, be a comparative failure.

Whether the county institute shall afford to the teachers an adequate return for the necessary expenditure of money and energy, and for the time consumed in attendance, will depend mainly upon two things: first, the conception which the managers and instructors have of the essential objects to be accomplished by the week's work; and, secondly, the ability of the instructors so to present the proper subject-matter of the week's instruction as to secure the interested attention and cooperation of all present.

The first element in the idea of the institute is, that it is an occasion for serious, earnest work on the part of both instructors and teachers. It is an opportunity provided by law for five days' thoughtful consideration of the questions which closely concern the actual work of the school-room, and in great measure determine the success or the failure of the teacher's work. It is thus opposed in its essential nature and objects to every form of institute instruction that seeks to furnish entertainment, as such. It is the time, the place, and the occasion for a specific work. There is but one legitimate method of arousing the interest and holding the attention of an institute, and that is through the importance and soundness of the matter furnished, and the clearness and directness of its presentation.

Secondly, the institute should be devoted to professional work. Academic instruction, for its own sake, can hold only the most subordinate place, if any, in the county institute. It is not to teach the facts and the rules of grammar, but methods of instruction in grammar. Not to drill the teachers present to read a given selection correctly, but to show the limits and objects of

teaching this subject in the schools. Not to discuss the subject-matter of United States history as such, but to determine the objects to be reached through the study of this subject, and to present some of the ideas which enter into the determination of any rational method of teaching it.

It is upon these and such subjects that the majority of teachers need aid. Searching examinations may exclude most of those who do not know the subjects well enough to teach them; but examinations can hardly test with accuracy the professional knowledge and skill of applicants for license. Many teachers get their first insight into and their first lessons upon the science and art of instructing in the county institute.

The following are given as some of the professional subjects, which it is the special work of the county institute to consider :

1. The theory of the school, as one of society's great institutions organized and maintained for a specific work.
2. The logical place and limits of each of the subjects in the course, as determined by the object for which the school exists.
3. Methods in connection with each of these subjects.
4. Model lessons in exemplification of methods.
5. The prominent facts of mental science—the nature and operations of mind being a constant factor in methods of instruction and in school government.
6. The principles of teaching, i. e., the principles which underlie education as a science.
7. School government and general management.

By no means do these exhaust the list of purely professional subjects; they are given only as indicating the general character of institute work as the writer conceives it. Some of these will be made the subject of discussion in another article.

W. W. PARSONS.

The man who hath no music in himself,
Nor is not moved with concord of sweet sounds,
Is fit for treason, stratagems, and spoils:
The motions of his spirit are dull as night,
And his affections dark as Erebus;
Let no such man be trusted.

[Shakespeare.]

OFFICIAL ' DEPARTMENT.

INDEFINITE ADOPTION OF TEXT-BOOKS.—[G, 389.] Where there are two series of text-books having both the same name, one of which has been in use in a county, I think that an adoption by the county board of one of these series, without designating which series was meant, should be interpreted as meaning the series then and previously in use in the county.

ATTENDANCE IN TOWNSHIP INSTITUTES COMPULSORY.—[G, 390.] It is the duty of a township trustee to contract with all teachers employed by him to attend township institutes. It is his duty to provide for holding such institutes, and to see that they are held. A mandate of court may be obtained to compel the trustee to perform both these duties. State Supt. Smart held that even though the trustees had failed to make a written contract with the teachers, they could require them to attend the institutes.

THE RIGHT TO GRANT A HALF-HOLIDAY.—[G, 391.] I think the school board of a town or city has the right to grant the teachers a half-holiday each month for looking over examination papers and making reports.

PAY OF TRUSTEES FOR VISITATION.—[G, 378.] I think a township trustee is entitled to compensation for time spent in necessary visitation of his schools. It is his duty to inform himself as to their condition and needs, and for this purpose he ought to visit each school. County commissioners must prevent undue or extravagant expenditure on account of such visitation.

SCHOOL PRIVILEGES OF CERTAIN CHILDREN.—[G, page 393.] My predecessors have interpreted the law on the enumeration of school children very strictly, but, though reluctant to differ from them in such matters, I have concluded, after considerable reflection, that it ought to be construed in every case as liberally as possible for the benefit of the children.

Section 4,472, Revised Statutes, requires school trustees to "make an enumeration of the children, white and colored, within their respective townships, towns and cities," and to "list the names of parents, guardians, or heads of families, male and female, having charge of such children." The law in this section recognizes three distinct relations in which the person having charge of a child may stand to the child, viz., parent, guardian, and head of a family. The term "heads of families" must refer to a relation not included in the terms parents and guardians. I think it is intended to cover cases where a person has children of school age in his home and under his

protection, whether as employes or as members of his family, though without formal adoption or legal guardianship. But there are other cases which the provision of the statute as to listing names does not include, but which must be provided for under the requirement enumerating the children within the several corporations. The domicile of a minor is with his parent or guardian, and in theory every minor is supposed to have a guardian. But in fact many are completely *sui juris*, independent of parental control or support, and living by their own labor. The homes of such, for the purposes of this section, must be the places where they are employed or stay without any immediate intention of departing therefrom. No one can be said to have charge of them; they do not live at the homes of their employers, and are not under their protection as heads of families. They are none the less entitled to school privileges under what our constitution requires to be a general and uniform system of common schools, wherein tuition shall be without charge, and equally open to all.

The Supreme Court remarks, incidentally, in *Johnson v. Smith*, 64 Ind. 275: "The theory of these statutory provisions [the school law of 1865, and supplemental and amendatory acts,] is, that each and every child of the proper age, without regard to race or color, within the limits of this state, is entitled of right, and without charge for tuition, to the benefits of such an education as may be obtained in and by our common schools." (Page 281.)

I hold, therefore, that all persons between the ages of six and twenty-one years are entitled to school privileges, and may be enumerated in the school corporations in which they, in good faith, have their home—understanding home in the general sense, not in the technical sense of legal domicile. Those who are in any way in charge of a resident head of a family should be so enumerated; those who can not be so assigned may be enumerated as without guardian. In acting under this interpretation trustees should guard against imposition by finding out whether the case can be brought under the law of transfer (Sections 4,473 and 4,474); and, if not, whether the child is dependent upon himself for support, or upon the person with whom he lives. In either case he should be admitted to the schools. But children can not legally be maintained and sent to school by parents or guardians in corporations other than those in which they themselves reside, nor can a minor become a resident of a school corporation merely to acquire an education therein. (*Wheeler v. Burrow*, 18 Ind. 14.)

The above are selected from my recent decisions.

JOHN W. HOLCOMBE,
Sup't Public Instruction.

EDITORIAL.

An agent is wanted to raise a club for the Journal in every township in the State. Send for terms.

Persons sending money for this Journal can send amounts less than \$1 in two and one cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

Several articles already in type, and a large amount of miscellaneous matter have been crowded out of this number of the Journal, and must wait till next month.

ASBURY UNIVERSITY.—It now seems certain that Asbury University will secure the princely endowment offered by Hon. W. C. DePauw. The conditions have been so far met as to practically insure \$240,000, not counting a bequest of not less than \$1,000,000 that will come to the University at Mr. DePauw's death. The name of the institution is to be changed to DePauw University. Would that other rich men were wise enough to thus invest their money while they live.

"WHAT THEY SAY OF US," is the heading of an article that has been crowded out now two months for want of space. The fact is the Journal never before was so much praised and never before was so prosperous. This is the largest issue ever made except when a large number of copies was needed for institutes. Space can not be given this month to even a few of the commendatory letters received; it must be devoted to what will be of more value to the teachers. All that the Journal asks is that the quantity and *quality* of matter it gives be compared with what is given by any other educational paper. It is willing to stand or fall on the score of merit.

THIS NUMBER of the Journal, according to the editor's estimate, is one of the best ever issued. Special attention is called to the articles on *Reading*—three of them, and no two alike or covering the same ground. The first article, which advocates the disuse of Readers as such, after the Third Reader, is by the author of "How to Talk" and "How to Write," two excellent books on the study of language as an art. Mr. Powell has given much thought to the language and reading work, and what he says is specially valuable, and the more

so because he tells not simply what he thinks, but what he does in his own schools. Let no one skip this article because it is long.

The articles on Reading in the Pedagogic Department, by Howard Sandison, Prof. of Methods in the State Normal School, and the one on "First Steps in the Primary Department," by Lewis H. Jones, are unique and will be highly appreciated by all readers.

Mr. Mills's article on How to Teach Geography is one of the best ever printed on this subject. It will bear not only reading but *studying*. The references can be changed, and thus the questions be adapted to any text-book.

No one will fail to read the articles in the Pedagogic Department on "How to Govern the Boys," and "The Characteristics of a Good Question."

The article on "Combinations in Adding" is invaluable to any one who will study it and apply it.

QUESTION ANSWERED.—A reader of the Journal asks the following question :

"Should a class be kept on one lesson in the Fourth or Fifth Reader until every word could be defined? For an ordinary education, would it not be better to be able to pronounce a great number of words than to pronounce and define a few ?

Answer—A word is simply the *sign* of an idea. Unless a child knows the meaning of a word he can not use it. A teacher may be able to spell correctly and pronounce correctly a Latin word, and yet know nothing of its meaning, and if he does not know the meaning he can not use it. An English word without its meaning is Greek to a child—it means nothing to him. Five words thoroughly learned, so that they form a part of the child's vocabulary in the expression of his thoughts, are worth more than the mere spelling and pronunciation of a hundred words without their meanings. The first will be useful, the latter useless.

✓ THE STATE TEACHERS' ASSOCIATION.

The State Teachers' Association will meet this year at Indianapolis, beginning on Wednesday evening, Dec. 26th. The chairman of the Executive Committee, J. F. Study, is faithfully at work, but the programme is not yet completed. It is very difficult to definitely arrange anything of the kind long in advance. Everything will be in readiness in good time. The following exercises already arranged for indicate the character, and will meet with general approval :

What Moral Results does Common School Training give? What Results should it give? W. N. Hailman, Supt. Laporte schools.

Separate Schools—For whom shall they be Established? Cyrus W. Hodgin, Prin. Richmond Normal

The Model Teacher. Miss Mary H. Krout, Crawfordsville.

Manual Training in the Public Schools. C. A. Thompson, Pres. Rose Polytechnic Institute, Terre Haute. Leader of discussion, Prof. W. F. M. Goss, Purdue University, Lafayette.

"Professional Ethics," and "The Schools of a Quarter-Century Hence," are two subjects yet without assignment.

The usual hotel and railroad reductions will be secured. Let the attendance be large.

HIGH SCHOOL SECTION.—Samuel E. Harwood, of Spencer, chairman of Executive Committee, reports the following programme for the High School Section of the State Association :

1. "Practical Value of Latin in the High School." Paper by C. P. Doney, Logansport. Discussion led by T. G. Alford, Vevay.

2. "Requirements for Admission to High School." Paper by R. G. Boone, Frankfort. Discussion led by C. W. McClure, Crawfordsville.

3. "What and How in English Literature." Paper by Mrs. R. A. Moffitt, Rushville. Discussion led by Miss L. D. Hadley, Richmond.

The meeting will be held December 26th, in the afternoon.

SCRIPT OR PRINTING, WHICH.

The question as to whether primary children shall be taught script from the first is frequently asked and variously answered. A few years ago printing was the universal rule, and in many schools it was continued up to and frequently through the Third Reader grade. The time which the printing was practiced before the change to script writing was made, gradually grew less, until now it is altogether omitted in many schools.

The strong tendency now is, in many of the best schools, to begin with the script at once. Good primary teachers who have tried the plan of printing for a few months and then changing to the script, and also the plan of beginning with the script at once, are uniform in their testimony in favor of the latter method. They testify that the script form is much more easily made, and that there is little or no difficulty arising from the fact that the child is at the same time learning to recognize the printed form from the chart or primer.

Why is there a script form at all? Why not conform all writing to the printed form, and thus have but one? The answer is that the script forms are much more simple, and more easily and rapidly made, *and save time.*

What is true of grown people is true of children. Should not the simplest form be given to the child, and does it not need to economize its time? The arguments seem overwhelming in favor of script from the beginning, and script only.

In the Indianapolis schools, Supt. Tarbell has given orders that in the "first year" all writing shall be done with slate pencils, and that the stress of the instruction shall be upon *form* of letters, little attention being given to the manner of holding the pencil. At the beginning of the "second year" the children begin to write with pen and ink, using tracing books, and the chief attention is given to "position" and the proper holding of the pen. The lead pencil is used only for drawing. By the use of the tracing book and the "form" already determined, the child can give its entire attention to the position of hand and body, and can easily be *drilled* into good habits. By discarding the use of the lead pencil for writing purposes, the difficulties of too great pressure and cramped position of fingers are largely avoided. The transition from the slate pencil to the pen is great, and the child feels that it is entering upon a new study, and is ready to cheerfully conform to all requirements.

WHAT KNOWLEDGE IS OF MOST WORTH?

"What Instruction should be given in our Colleges?" is the title of an article in the November *Atlantic*, by Albert S. Bolles, which is well worth reading. The author says that a course of study should be arranged with reference to the following aims: (1) to discipline the mind; (2) to teach the expression of thought in speech and writing in the best manner; (3) to develop the powers of the body and mind as well as an understanding of moral and social relations; (4) to impart knowledge; (5) to build up a solid foundation for those special studies and pursuits which are to be undertaken after the completion of the course."

After criticising severely the results of present college instruction he argues that the above ends can be best reached by the following three lines of study:

(1.) Language—giving much prominence to the English—adding two foreign languages, the German and French being much preferred to the Latin and Greek.

(2.) The cultivation of the body and mind, also the morals and social relations. At the foundation of this line of study is placed Anatomy, Physiology, and Hygiene, to be followed by Logic and Mental Philosophy.

(3.) The aim of the third line of study is the acquisition of facts. The foundation of this department is History.

The relegation of all the higher mathematics, of Latin and Greek, and of most of the natural sciences to special courses of study, is novel to say the least.

Mr. Bolles does not attempt to depreciate the value of these studies in special lines of work and life, but claims that his outlined course will make a better foundation upon which to build, and is more *practical*. The article is ably written and will well repay the reading by any one interested in this higher-education problem.

INDIANA POINTS.

Ohio is the smallest county in the state, Allen is the largest. Marion is the most populous, Starke is the least populous. Indiana has over 5000 miles of railroad. Brown is the only inland county without a railroad, and Ohio, Switzerland, and Perry counties are the only river counties yet lacking railroad facilities. The most eastern point of the state is a projection of Switzerland county. Michigan forms a part of the eastern boundary of the state. The southern boundary of Indiana is *low-water mark* on the north side of the Ohio river. The northwest corner of the state is in Lake Michigan. The second Prime Meridian and the Base Line, from which nearly all land surveys in Indiana are made, cross in Orange county, a few miles south of Paoli.

NEW EDITION OF THE SCHOOL LAW.

Superintendent Holcombe is now at work on a new edition of the school law. An excellent feature of the new law will be the codification of opinions and decisions on school questions by State Superintendents and Attorney Generals. With these decisions scattered as they are, and widely separated in time, it is at present difficult, even for a lawyer, to get at the law and the rulings.

To illustrate: Under the head of "The County Board of Education," after quoting the law, decisions are given touching the duties of the board on the various points concerning which there have been disputes. For example:—

Adjourned, not Called Meetings.—The law provides for the assembling of the county board semi-annually on the first days of May and September. The board having met on the first day of September they would have a right to adjourn from day to day until the business before them was completed. But if they have adjourned *sine die*, they would not have a right to meet any more until the first day of May.—*Woollen, Att'y Gen.*

I think this opinion properly states the law on the subject, (*State v. Harrison*, 67 Ind. 71; *Sackett v. State*, 74 Ind. 491.)—*Hord, Att'y General*.

It is my opinion, after a careful examination of the law, that the county board can only adopt text-books on the days fixed by law in May and September, or at an adjourned meeting from either of the above. There is no authority for called meetings.—*Bloss, Supt.*

Several decisions under this general head have recently been published in the Journal, and further illustration is unnecessary.

This work will be of great value to all who are interested in school matters, and Supt. Holcombe should have due credit.

GEMS OF THOUGHT.

Neither a borrower nor a lender be,
For loan oft loses both itself and friend;
And borrowing chills the edge of husbandry.

This above all—to thine own self be true;
And it must follow as the night the day,
Thou canst not then be false to any man. [*Shakespeare*.

Know thou thyself, presume not God to scan;
The proper study of mankind is man.

Honor and shame from no condition rise;
Act well your part, there all the honor lies. [*Pope*.

Procrastination is the thief of time.—*Young*.

One by one the sands are flowing,
One by one the moments fall;
Some are coming, some are going;
Do not strive to grasp them all.

One by one thy duties wait thee,
Let thy whole strength go to each;
Let no future dreams elate thee—
Learn thou first what these can teach. [*A. A. Procter*.

Example is more forcible than precept. People look at my six days in the week, to see what I mean on the seventh.—*Cecil*.

Those whose chief happiness in this life consists in seeing others miserable, are of all men most despicable.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR SEPTEMBER.

THEORY AND PRACTICE.—1. State the different purposes the teacher should have in view in conducting a recitation in the First Reader.

2. What are the characteristics of a good recitation?
3. What are the evil effects of punishment of any kind? When proper to be administered?
4. State the proper and the improper uses of fear as a motive to right conduct.
5. What different aims should the teacher have in conducting a recitation in the Fourth Reader from those appropriate to the First Reader grade?

READING.—1. What is the middle pitch, the high, the low? When is each used? 5. 5.

2. What are some of the chief errors to be avoided in reading poetry? 10
3. What evil results from the error regarding punctuation, that it is to guide the voice rather than show the sense? 10
4. Mention five uses of the Dictionary in connection with the reading lesson. 2 each.
5. What use do you make of the preface or introduction to the reading books? 10
6. Read a paragraph of prose and a stanza of poetry selected by the superintendent. 25 each.

PHYSIOLOGY.—1. What office is performed by the ligaments of the joints?

2. What is the difference between voluntary and involuntary muscles?
3. What functions are performed by the skin?
4. What are the different kinds of organic substances used as food?
5. How do you account for the sensation of hunger and thirst?
6. What is the effect of alcohol upon the tissues?
7. Give brief directions for the preservation of the teeth.
8. Describe the process of assimilation.
9. In what organs does a change in the blood take place as the result of respiration?
10. What are the supposed functions of the cerebellum?

ARITHMETIC.—1. Add MDCCCXLI, DCXL, MIV, CCCXIX.

A owned $\frac{1}{4}$ of a vessel and sold to B $\frac{1}{8}$ of his share, and to C $\frac{1}{8}$; what part did he still own? 5, 5.

3. Tell, by inspection, how many decimal places $\frac{1}{16}$ will require when reduced to decimals. What law determines this? 5, 5.

4. What will be the profits on 4 gals. of wine costing \$4.10 a gal., that is sold at 20 cts. a gill. 5, 5.

5. A ditch is 150 m. long, 15 dm. deep, 3 m. wide at the top, and 20 dm. wide at the bottom; what did it cost to dig it at 50 cts. a cu. m.? 5, 5.

6. A and B in exchanging farms value them respectively at \$50.15 and \$56 per acre; if B's is really worth \$52 an acre, what is the real worth of A's? 5, 5.

7. If \$6,000 6% stocks be sold at 90, and the proceeds invested in 10% stocks at 1.55, what will be the change in the income? 5, 5.

8. A square piece of land contains 810,000 sq. ft.; the owner divides it into 4 equal squares by two streets crossing each other 100 ft. wide; what is the length of a side of each piece? Make diagram. 5, 5.

9. A cow is tethered by a rope 40 ft. long; from how much ground can she eat the grass? 5, 5.

10. At what rate must I buy a 6% stock to make as good an income as from a 5% at 75? Analysis. 5, 5.

GRAMMAR.—1. How are sentences classified according to their use? Illustrate each class with a sentence.

2. What is a collective noun? When is a collective noun singular? when plural? Illustrate.

3. What is the difference between an infinitive and a participle?

4. Explain how an adjective both limits and enlarges the sense of a noun.

5. What is an idiom? Give an example.

6. Correct the following, and give reasons for your corrections:

Whom do men say that I am?

My father allowed my brother and I to accompany him.

A fondness for show is, of all other follies, the most vain.

Our parents did not study grammar as we do.

What signifies fair words without good deeds?

7. Give the etymology and syntax of each word in the following sentence: The President having given his assent, the bill became a law.

8. Parse *what* and *you* in the sentence, What do you mean?

9. Re-write the following sentence, restoring capitals and punctuation marks: Whatever happens exclaims mary i am the wife of

the prince of spain crown rank life all shall go before I take any other husband.

10. Write a newspaper paragraph descriptive of some casualty.

SPELLING.—1. When do we duplicate the final consonants of monosyllables in the addition of suffixes? 10

2. How do you teach the use of diacritical marks, and to what extent do you use them in written exercises? 10

3. Mention two uses of silent letters. 5, 5

4. Have the following words the same sound of *o*? *God, not, dog.* Write them with diacritical marks. 4, 2, 2, 2

5. What is the sound of the syllable *tion* in *nation*, etc., and how is it often mispronounced? 5, 5

6. Spell ten words dictated by the superintendent. 50

U. S. HISTORY.—1. From what years do the Spanish, English, and French explorations respectively date? 4 off for each error.

2. How long a time elapsed between the beginning of the period of discovery and that of permanent colonization? Name the points from which each may be dated. 2 pts, 5 each.

3. What striking similarity exists in the causes leading to the founding of the colonies of Massachusetts, Rhode Island, Maryland, and Pennsylvania? 10

4. Give three reasons why, in your judgment, Massachusetts and Virginia played such important parts in the colonial history of our nation? 3 off for each error.

5. What spirit characterized Penn in his founding of Pennsylvania, and state some profits of it? 2 pts, 5 each.

6 and 7. Give a brief account of colonial times respecting, 1st, Roads. 2d, Manufactures. 3d, Social customs. 4th, Dress. 5th, Religion. 5 pts, 4 each.

8. State the territory occupied chiefly by the Spanish, Dutch, English, and French explorers at the time when their colonies were established. 1st two, 2 each; 2d two, 3 each.

9. Which of the four inter-colonial wars was the most important? What was the chief cause leading thereto, and what do you regard as the most significant result springing out of it? 1st pt, 2; 2d pt, 4; 3d pt, 4.

10. State something concerning the literature of the days preceding the Revolution. 10

GEOGRAPHY.—1. Give the location and form of each of the oceans. 10

2. Define climate. State two causes for the variation of temperature in different parts of the earth. What are zones? 2, 4, 4.

3. Give the situation and boundary of the United States? 5, 5.

4. What two large peninsulas form a part of Mexico? 5, 5.
5. Name the States which border on the Gulf of Mexico. 10
6. Describe the distribution of moisture in the United States. 10
7. In what regions are the largest cities of the United States situated? 10
8. Into what branches is the government of the United States divided? Of what bodies does Congress consist? 5, 5.
9. Of what two contrasting regions does Europe consist? Where is the White Sea? 5, 5.
10. Describe the surface and climate of Great Britain and Ireland. 5, 5.

ANSWERS TO STATE BOARD QUESTIONS FOR OCTOBER.

GEOGRAPHY.—1. Distance from the equator. Distance from the prime meridian.

2. Latitude, elevation, and sea winds.
3. The inclination and fixed position of the earth's axis, during the annual revolution round the sun.
4. The torrid zone is bounded by the tropics; the north temperate by the tropic of Cancer and Arctic Circle; the south temperate by the tropic of Capricorn and the Antarctic Circle; the north frigid by the Arctic Circle; the south frigid by the Antarctic Circle.
5. Mountainous.
6. The Amazon system embraces the Amazon river and its numerous tributaries; the Amazon is three thousand miles in length and carries to the sea more water than any other stream on the globe. The La Plata system corresponds in position to the Mississippi, of North America; it drains the southern parts of the central plain and eastern highland.
7. Hot and moist.
8. Smoky Mountains, Blue Ridge, Black Mountains, Roanoke, Neuse, and Cape Fear.
9. Smoky Mountains, Cumberland Mountains, Cumberland and Tennessee rivers.
10. Renders it cooler in summer and warmer in winter. They assist in carrying vessels forward in their course.

PENMANSHIP.—1. The elements of *a* are left curve, lower turn, right curve, and slanting straight line. The elements of *o* are left curve, lower turn, right curve, and upper turn; *p* right curve, slanting straight line; *C* right curve, left curve, and lower turn; *i* right curve, slanting straight line, and lower turn.

2. *O*, the eighth principle; *U*, the ninth and first principles unit-

ed ; *ℓ*, eighth principle modified ; *m*, first and second principles ; *u*, second principles.

3. One-fourth higher than other short letters.

4. (1) To simplify the forms of letters. (2) To educate the taste to more pleasing proportions in the parts of letters.

5. The line which bounds the height of the small letters. The line on which the writing stands.

PHYSIOLOGY.—1. When a bone is broken, as when other parts are injured, the undifferentiated cells of the blood (white corpuscles) go at once to the place of injury and begin the process of repair. Usually a larger quantity of material is poured out around the point of fracture than is necessary, but the excess is shortly absorbed if the bone has been properly set and is held by splints.

2. Judicious exercise strengthens the muscles, gives them firmness of texture and a deeper red color, increases their power and keeps their wastes efficiently removed. Too violent or excessive exercise breaks down muscular tissue, exhausts its vitality, and also tends to throw an unusual and dangerous excess of work suddenly upon the heart.

3. A cold bath, of short duration and immediately followed by a brisk rubbing off with a coarse towel, may be beneficial to a person of sound constitution. A tepid bath, however, is safer, more pleasant, and equally beneficial. In neither case should there be long delay in putting on the clothing.

4. Unchanged starch is insoluble and indigestible in the alimentary canal. Under the influence of the ptyalin of the saliva and, later on, of the juices of the intestines, it may be changed into grape sugar which is of considerable value to various portions of the body, the blood, lymph, etc.

5. Martin (*Human Body*, p. 304) says: "According to quality or circumstances alcohol may be a poison or a food ; and as a food it may be regarded as a force regulator or a force generator. There is no doubt that alcohol in certain doses may be properly called a food. * * * Commonly, however, alcohol is not taken for this purpose, but as a force regulator, for its influence on the nervous system or digestive organs, and it is in this capacity that it becomes dangerous. For not only may it be taken in quantities so great that it is not all oxidized in the body, but is passed through it as alcohol, or even that it acts as a narcotic poison instead of a stimulant ; but when taken in what is called moderation there can be no doubt that the constant 'whipping up' of the flagging organs, must be dangerous to their integrity."

8. Coagulation, or clotting of the blood is due to the separation of the fibrin from the plasma, its hardening, and the entanglement

within it of the blood corpuscles. It is of great value both to man and the lower animals, since it tends to close wounds or the cut ends of blood-vessels, and thus stop the escape of bloods.

10. There is considerable difference of opinion as to the functions of the medulla oblongata. It connects the brain in front of and above it, and gives rise to various cranial nerves. Here the crossing of the motor nerve fibers is said to take place before their passage onward to the brain. Here, also, is said to be the location of certain important automatic centers, especially those regulating certain operations closely concerned with the maintenance of life—circulation, respiration, parts of the process of digestion, etc. It is said by some also to aid the cerebellum in the regulation of certain muscular movements, and by others to be the origin of certain noted reflex nervous actions.

READING.—1. The rhetorical pause and the poetic pause (whether cæsural or final) are not usually indicated by punctuation marks. When used as an apostrophe, as a cedilla, or as part of the marks of quotation, the comma does not indicate a pause.

Mechanical reading is frequently monotonous, lacks energy of expression or spirit, is usually imitative, and fails to impress the hearer with either the thought or the sentiment of the selection read.

It is usually due to a failure in the previous study of the lesson or to not studying it at all, to a lack of realization of the thought or the feeling expressed by the words, to a lack of ready recognition of the words and of the ideas represented by them, and to the habit of regarding the reading lesson as a task rather than a pleasant and instructive exercise. The sources of the defect indicate the way to remedy it.

4. The amount of time at the disposal of the class must regulate the extent to which attention can be given to authors and literature. The aim of the teacher in this matter should be to give or draw out so many and such facts as will arouse curiosity and interest, and thus lead the pupils to further investigation for self-gratification. The age and advancement of the pupils in the class should also regulate the amount of knowledge given or required upon these points. The younger the pupils, the less they can be expected to feel interested in or to find out for themselves.

5. Occasional concert reading may help to break up monotony, slowness, drawling, mispronunciation, and to aid the pupils in securing proper inflection, emphasis, and pitch.

HISTORY.—1. "The Republican party was born in Michigan, on the sixth day of July, 1854." Its object was to oppose the extension of slavery in other states and territories.

2. Increased agitation of the slave question, which resulted in the Civil War.

3. John C. Calhoun. His doctrine of States' Rights held that any State had a right to set aside an act of Congress, declaring it void, and also to withdraw from the Union.

5. Richmond was the capital of the Confederacy, the Mississippi the outlet to the Gulf, and Chattanooga an important railroad center.

6. July 4, 1863, the battle of Gettysburg and surrender of Vicksburg. The Confederates were disheartened and gave up all hope of an invasion of the North.

7. The abolition of slavery.

9. The panic began with the failure of Jay Cook & Co., of Philadelphia. Depositors withdrew their money from other banks, causing failures in rapid succession throughout the United States. At the close of the War of 1812, 1837.

10. The irregularities of the election in some of the Southern States and in Oregon. To settle the question in dispute, Congress created the Electoral Commission, composed of five United States Senators, five Representatives, and five Judges of the Supreme Court. This Commission decided by a vote of "8 to 7" that Hayes was duly elected.

GRAMMAR.—I. Class names, abstract and collective nouns. (a) I saw the *man* fall. (b) His *goodness* was unquestioned. (c) The *army* was demoralized.

2. *Thou, he, and I* is the proper order of these pronouns used coordinately.

3. *Tell, make, send, give, promise.*

4. *Many a* soldier *fell* bravely fighting for the right. *Many a* is a complex adjective, used idiomatically, limiting soldier. *Fell* is a verb, agreeing with soldier, its subject. *Fighting* is a present participle, used adjectively, modifying the noun soldier by assuming an action in regard to it.

5. The eight grammatical relations are: Number, gender, case, person, voice, mood, tense, comparison.

6. *Adverbs of place; adverbs of time; adverbs of manner; adverbs of degree; adverbs of cause.*

7. (a) I will *learn* the lesson. (b) I will *teach* the boy how to write.

8. He that fights and runs away,
May live to fight another day.

This is a complex, declarative sentence. Log. sub., *He that fights and runs away*. Gram. sub., *He*, modified by the restrictive relative adj. clause *that fights and runs away*. Log. pred., *May live to fight another day*. Gram. pred., *May live* completed in meaning by the infinitive *to fight*. *To fight* is modified by the prepositional phrase *another day*, expressing a relative of time with the preposition un-

derstood. Analysis of clause: Sub., *He*; pred., *runs and fights*, modified by the adverb *away*.

ARITHMETIC.—[As we go to press we find that the answers in arithmetic have been misplaced. We now have space for only the answers, without indicating the processes.—ED.]

(1.) Multiplying feet by 12 simply indicates the number of inches.
(2) $\frac{1}{2}$. Ans. (3) 19.98. Ans. (4) 3620 geo. miles. Ans. (5) 26-
.4552 lbs Av. Ans. (6) \$1200. Ans. (7) \$5024.39. Ans. (8) 1650
feet. Ans. (9) 4. Ans. (10) 9 $\frac{1}{2}$ cts. Ans.

MISCELLANY.

SPENCER.—The schools are prospering under the direction of S. E. Harwood.

DEKALB COUNTY will hold its institute at Butler, beginning Nov. 5th. C. M. Merica is superintendent.

HANCOCK COUNTY.—In reporting the attendance of the institute in this county it was given at 140 instead of 240.

EDWARDSPORT.—The schools have opened full and doing well—257 pupils and 5 teachers. Thos. J. Shively, principal.

MANUALS AND REPORTS.—We have on file a large number of manuals and reports of schools which we hope soon to find space in which to "notice"

HUNTINGTON.—The schools are fuller than ever before—700 in ten rooms—too full. The new Supt., Morgan Caraway, seems to be making a good start.

WESTFIELD.—The Union High School, under the direction of Friends, is in a very flourishing condition—more so than for many years. The principal is A. Rosenberger.

GREENE COUNTY.—Supt. S. W. Axtell read a report to his county board at its last meeting that had a tendency to arouse interest. It was full of sound sense and good suggestions.

HAMILTON COUNTY.—Supt. Morris is placing great stress upon work in the township institutes, and this is wise. If well conducted they are a great power for good. His outlines of work are full and excellent.

D. D. Van Wie is now owner and publisher of Eckardt's Anatomical Charts, which are arranged expressly for use in schools. These are the best charts of the kind yet published, and can be made very helpful in teaching the subject of physiology.

NOTRE DAME—An iron statue of the Virgin Mary, weighing two tons and standing eighteen feet in height, has just been placed on the dome of Notre Dame University at South Bend. The University is reported in a prosperous condition.

TOBACCO AND TAXES.—Indiana pays in one year for the support of its schools, \$4,491,850; in the same time it pays for tobacco, \$9,891,505, and yet some people complain that the schools cost too much—the taxes are too high. Shame on them.

GREENCASTLE—The schools are full. The high school is nearly double what it was last year, and growing. J. F. Study, the superintendent, seems to be doing good work. Miss Martha Ridpath, sister of Prof. Ridpath, is principal of the high school.

DEARBORN COUNTY.—Supt. H. B. Hill has arranged for his townships to meet in twos for institute work. This plan has its advantages, one of which is, it enables the county superintendent to get around often. The outline of work sent out is among the best we have seen.

ST JOSEPH COUNTY.—Children's day at the county fair was a grand affair. The actual number of children present was 6184, and the rain kept many away—two entire townships. Union township alone brought 710 children, and had in the procession 26 four-horse teams. Supt. Moon, trustees, and teachers are to be congratulated.

A. W. Clancy, late superintendent of the Delaware county schools, now representing the house of A. S. Barnes & Co., is at present working in Iowa. He has been visiting the schools of Clinton, Cedar Rapids, and Des Moines, and speaks in strong terms of the schools and the superintendents. Mr. Clancy is sure to make friends wherever he goes.

FRANKLIN COUNTY gives employment to 120 teachers. The schools are reported in first-class order. M. A. Mess is the superintendent. The *banner club* for the Journal came from this county last year. Supt. Mess has made his club this year reach 96, and reports others "in sight." The teachers of "Old Franklin" know a good paper when they see it.

WINCHESTER.—The following notes were made after an hour spent in the Winchester schools: High School in good working order under the care of C. H. Wood, with about 70 students. Other schools full and running smoothly. A primary room specially good. Five hundred well selected volumes in the high school library. A well classified cabinet, and a goodly amount of apparatus. Supt. E. H. Butler is at work. He is just now engaged in having the children collect and name all the varieties of apples they can find—a profitable pastime.

INTER-STATE EDUCATIONAL MEETING AT LOUISVILLE—An educational meeting of much interest, especially to the South, was recently held at Louisville, Ky. Twenty-two States were represented, and the convention was in session two days. The subjects considered were "National Illiteracy," "The Education of the Colored Race," "The Best School System," "How to Awaken a Deeper Interest in Education," and "Federal Aid to Overcome Illiteracy." The last named subject attracted most attention. While there was a general if not a unanimous assent to the proposition to ask Congress to give aid, there was a radical difference of opinion as to whether the petition should indicate whether the money appropriated should be expended by Federal or State agencies. An amendment offered by State Supt. Holcombe, to the effect that Federal aid should be applied by State authorities, precipitated a lively discussion, but the amendment carried "by a large majority."

A committee was appointed to present the petition for aid to Congress, and to do what could be done to secure the appropriation.

PRESIDENT WHITE'S FAREWELL REPORT TO THE TRUSTEES OF PURDUE UNIVERSITY.—The report is in Dr. White's own clear style. It sets forth very forcibly the character and purpose of the school. It shows the last year to be the most prosperous in its history. It discusses at great length the "Greek Fraternity" question, and gives a history of the trouble in the college and in the legislature. It pays its compliments to the "consolidation scheme," and shows how it would be fatal to all *industrial* education. The courses of study are given and explained, and the needs of each department stated.

President White took the University almost at the beginning, and built it up to be one of the best schools of its class in the land. In many directions his plans had not yet been consummated. An institution can not be built in a day; it must *grow* into the lives and needs of its patrons, and growth means time. Dr. White builded wisely and well so far as he was able to go, and it remains for others to carry forward his noble work.

Those interested in the subjects treated in this report should send for it.

MADISON.—The writer recently had the pleasure of passing a day in the Madison schools, and the time was pleasantly and profitably spent. While we would be glad to speak in detail of the various buildings and teachers, we can only say in a general way, that the entire day was given to observing school work, and nearly every room in the High School, Upper Seminary, Lower Seminary, Central Building, and Colored School was visited, and the aggregate impression was very favorable. The order was uniformly good, and the instruction was, with few exceptions, in accordance with the best

thought of the profession. Taking the schools in which work was observed as a fair sample of all, it is doubtful whether another city in the state can surpass Madison in the character of its instruction and the maturity and intelligence of its teachers.

Supt. J. H. Martin has his work well in hand, and deserves much credit for the good work he is doing.

The joint meeting of the city and county teachers was well attended and full of interest. John Mickleborough, Prin. of the Cincinnati Normal School, was present and did some good practical work. Good reports were current as to the work Supt. Arbuckle is doing in the county.

PROGRAMME FOR TOWNSHIP INSTITUTES—NOV. 1883.

L. P. HARLAN, SUPT. MARION COUNTY.

1. *Object Lessons*.—(1) The design of; (2) the matter of; (3) the preparation of the teacher for; (4) the method to be pursued in conducting the same; (5) the abuse to which the system is liable; (6) the object lesson as a regular exercise or as a method in recitation, etc

2. *Primary Reading—Continued*.—(1) Impediments in pronunciation; their remedies—imperfect vocal organs, timidity, bad habits. (2) How develop the thought of the selection so that pupils may apprehend it simultaneously with the recognition of the words in a sentence. (3) The length of lesson in Primary Grades.

3. *Arithmetic*.—(1) First steps in Multiplication and Division—"long" or "short" division first, why? (2) Tables of weight and measure—difficulties in teaching, reviews, blackboard work, explanations, etc. (3) Formulate and write out successive steps to be taken in teaching the subjects of arithmetic.

4. *Geography*.—(1) How can pupils form correct ideas of natural divisions of land and water? (2) Plan in detail geography for the study of any section of country. (3) Classification of geographical facts which will be a guide to pupils in studying lessons. (4) Methods of conducting recitations, etc.

5. *Noon—Written Spelling*.—(1) Purpose; (2) advantages over oral spelling; (3) best methods of cultivating the faculty of form upon which correct orthography depends; (4) what orthographical rules should be fixed in the mind of the pupil? (5) Methods of using, 1st, slates in an exercise in spelling; 2d, the blackboard in an exercise in spelling; 3d, an exercise in false orthography; 4th, dictation exercises

6. *Language for Beginners*.—(1) Show the institute by a lesson from blackboard the successive steps in oral work in language, including, 1st, exercises in familiarizing pupils with names of objects;

2d, formation of simple sentences; 3d, different kinds of sentences; 4th, the learning of simplest rules of capitalization and punctuation; 5th, copying of reading lessons or other work on slates; 6th, reproduction of stories told or read by teacher. (2) 1st, the time for such exercise in the mixed school; 2d, requirements on the part of the teacher; 3d, grading, slate work, and correction of pupils' errors.

7. *Essay*.—(Subject to be selected by essayist.)

8. *A Paper*.—"School Government." (1) Purpose. 1st, its direct and immediate objects; 2d, its direct and ultimate effects. (2) Qualifications on the part of the teacher. (3) Incidental conditions of which advantage is to be taken. (4) Mechanical aids that influence pupils to order, etc.

9. *Literary Exercises*.—Declamations, select reading, or other literary work.

Let each of the above exercises be assigned to a teacher, and then have the institute discuss each exercise.

PERSONAL.

Elmer Henry has charge at Russiaville.

C. C. Cissel holds the helm at Wawaka.

O. L. Prentice wields the birch at Cromwell.

L. J. McConnell directs the young ideas at Avilla.

D. K. Hays has charge of the schools at Brimfield.

L. Baldwin is principal of the schools at Poplar Ridge.

W. S. Encell, of Warsaw, is the new principal at Knox.

W. B. VanGorder is in charge of the Rome City schools.

Geo. Caraway is now principal of the schools at Fort Recovery, Ohio.

J. B. Kibbie is doing a satisfactory work as superintendent of the Kendallville schools.

Mrs. Jennie H. Goodwin is making an efficient principal of the Kendallville high school.

A. P. Howe, formerly Supt. of Hamilton county, is principal of the public schools at Westfield.

J. A. Carnagey, a graduate of Hanover College, is the principal of the Madison high school.

W. F. Barnett, a graduate of Wittenberg College, Ohio, is principal of the Ligonier high school.

John F. Haynes is principal of the Carmel schools, and the order in these is pronounced "excellent."

Absalom Rosenberger, a graduate of Earlham College, is principal of the Union High School at Westfield.

H. M. McKnight, of Crawfordsville, is now located at Pueblo, Col., and speaks in high terms of the schools there.

Alex. C. Hopkins, recently of Danville Normal, is now president of Eastern Illinois College, located at Danville, Ill.

F. D. Haimbaugh is serving his third year as principal of the Brookston Academy. The school is doing well.

D. D. Luke, for the past six years, has had charge of the schools at Ligonier, and the schools have steadily improved.

T. G. Alford, Supt. Vevay schools, and J. A. Hart, Co. Supt, are conducting a live educational column in the *Vevay Reveille*.

Prof. J. Lawrence Smith, the noted scientist, died recently at his home in Louisville. His reputation extended beyond the ocean.

D. H. H. Shewmaker is principal of the Muncie high school, not W. R. Snyder, as stated last month. Mr. Snyder is a teacher in the school.

Dr. O. F. Fitch has the Morristown schools this year. After two years' rest, and with a new school building, he will doubtless make good schools.

R. N. Harrison, son of Prof. Thos. Harrison, is in charge of the Lynn schools. He leaves the practice of medicine and returns to his first love.

E. W. Poindexter, a teacher of high standing, late of Bloomfield, has left the profession, and is now agent for the New York Life Ins. Co., at Vincennes.

A. D. Woodworth, a graduate of Oberlin, is the new Professor of Latin at Union Christian College, at Merom, Ind. He comes highly recommended, and has made a good beginning.

Miss Harriet Noble, daughter of Gen. Laz. Noble, of Vincennes, has been elected Professor of English Literature in Butler University vice Miss Merrill, resigned. Miss Noble is a graduate of Vassar College, and is highly commended by those who know her best.

W. B. Wilson, formerly superintendent of the Edinburg schools, but more recently of the Institution for the Blind, is now giving good satisfaction as superintendent of schools at Tuscola, Ill. Miss Maggie Husted, a recent graduate of Butler University, is his high school teacher.

Miss Kate Merrill, for the past fourteen years Professor of English Literature in Butler University, has resigned her place, and will hereafter teach private classes in Indianapolis. Miss Merrill has occupied this chair just resigned with credit to herself and honor to the college. It will be almost impossible to fill her place.

Hon. Geo. W. Hoss, formerly Superintendent of this State, and for many years editor of this journal, is now located at Topeka, Kansas, and is editor of *The Educationist*. As this paper comes to our table from month to month filled with practical matter, our mind naturally reverts to the editor and to the many years of faithful, efficient service he devoted to the educational work of Indiana.

A. J. Rickoff, for many years superintendent of the Cleveland, O., schools, has resigned the superintendency of the schools at Yonkers, N. Y., having served since September, 1882. It is understood that Mr. Rickoff will devote himself for some time to come to his publications. L. W. Day, an assistant superintendent of the Cleveland schools, has been elected his successor, at a salary of \$3,000.

COUNTY INSTITUTES.

FRANKLIN COUNTY.—The institute was held at Brookville, August 27-31. The attendance was good throughout, with an enrollment of 121. The term was one of the most interesting and profitable ever held here. Our workers were D. M. Geeting, of New Albany; J. M. Olcott, of Indianapolis; Co. supt. M. A. Mess, Messrs. Griffin, Gregory, and Mundell, home workers. Excellent papers were read by Messrs. S. J. Merrill, C. W. Lewis, M. A. Mess, and Miss Lulu Meyers. Poems by Mrs. Sumpter and Mrs. Day. Evening sessions were held on Tuesday and Wednesday.

The organization occupied but a short time, and from the first an interest was manifested which increased to the end. Much praise is due Supt. Mess for his efficient management and his school work.

M. W. LEWIS, Sec'y.

OWEN COUNTY.—The institute was one of the best ever held in the county. H. B. Brown, of Valparaiso, was the only "foreigner" present. The display of school work by pupils was a striking feature of the institute. About 150 different pupils were represented. The subjects were spelling and arithmetic. A vote was passed to continue the work next year.

BOOK TABLE.

The Asbury Monthly has changed its form and dress. It is now simply beautiful.

Lippincott's Sixth Reader; Popular Series. By Marcius Wilson. Philadelphia: J. B. Lippincott & Co.

This volume of over 500 pages fittingly concludes Lippincott's Pop-

ular Series of Readers. The volume is an elegant one, very attractive in make-up and appearance, and filled with gems of literature. It is both a Reader and an English Literature. The formal study of the subject of Elocution has been reserved for this book, when its finer points could be appreciated. The subject is here thoroughly treated. The index, with a brief sketch of authors, is a good feature.

Drill-Book in Algebra. By M. L. Perrin. Philadelphia: J. B. Lippincott & Co.

This little book is arranged by subjects, and is intended for class drill and review. It will supplement any book on the subject. There is an edition for teachers with answers, and one for students without answers. It covers well the ground of elementary algebra. To any teacher of algebra such a book needs no recommendation. Price, 75 cents.

College Record, is the name of the paper published by the Literary Association of Union Christian College, at Merom, Ind. Editor-in-chief is D. C. Hubbs. It is an 8 page, 3-column paper, and filled with matter of interest to old students and friends of the college. It deserves a hearty support, both on account of itself and the cause it represents. Price, 50 cents

A Text-Book on Physics. By Henry Kiddle, late Supt. of the New York schools. New York: Wm. Wood & Co.

The volume is comprised in 272 pages, and constitutes a complete course. It is based on the larger work of Ganot, one of the recognized authorities on physics. The work is profusely illustrated and the text is pointed and direct. Mr. Kiddle does well whatever he attempts. Teachers of this subject would be repaid by an examination of this book.

A Hand-Book of Civil Government. By Thos. D. Suplee. Philadelphia: Eldredge & Brother.

The importance of studying the history and form of our government is so generally conceded that it needs no urging. The historical part of this little volume is very interesting. The subjects are treated in a logical order, and much of the work diagrammed. In the higher grades of the common schools, where classes can not be formed, oral lessons should be given. The book before us is one of the best on the subject we have seen.

Scott's The Lady of the Lake. By Wm. J. Rolfe. Boston: James R. Osgood & Co.

This is one of the standard English classics, and all teachers who believe that classic English should be *studied* as classic Latin and classic Greek should be studied, will welcome this little volume. The text is pure and the notes are just what most persons need in order

to fully understand and appreciate the poem. The notes and explanations occupy more than 100 pages, and those who have read Rolfe's notes on Shakespeare's plays know how full and how helpful they are. It is just what is needed for home and school.

The Way to Teach; What not to Teach; Gems of Thought; Lessons in Numbers. By Wm. G. Griffin, Prin. of the Training School, Newark, N. J. New York and Chicago: A. S. Barnes & Co. Chas. E. Lane, 152 Wabash ave., Chicago, Western agent.

This is a *little* book—only 84 pages in all—and it treats a variety of subjects, as noted above. It is crisp, pointed, direct, and must be helpful to scores of teachers—especially young teachers. The Grube plan is followed in the number work; the "gems" are well selected; and altogether it is a good little book.

The Christian Union continues to be, so far as we are able to judge, the best family religious newspaper in the world. While it is non-sectarian and liberal in its views, it is always Christian and reverential. Its editor is Lyman Abbott, one of the ablest writers on moral and religious subjects in America, and the contributors are for the most part men noted for their learning and philanthropic spirit. The weekly summary of important events throughout the world is of its self worth the price of the paper. It is published at 20 LaFayette Place, New York.

Dio Lewis's Monthly, Vol 1, No. 3, is at hand and is full of good, healthy reading. While the literary style is not quite up to the standard of the *Atlantic*, it is fresh, entertaining, and *instructive*. The subjects treated are such as touch health, society, and social institutions. It seems to be its chief business to deal with such questions as affect practical life and every-day living. It is certainly well worth its cost. It is published by Frank Seaman, 71 Bible House, New York, at \$2.50.

BUSINESS NOTICES.

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A. R. HOWE, *Treasurer.*
August 18, 1881.

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INDIANAPOLIS, IND.

INDIANA SCHOOL JOURNAL.

Vol. XXVIII.

DECEMBER, 1883.

No. 12.

SOME OLD ENGLISH SCHOOLMASTERS.

✓ JAMES BALDWIN, SUPT. RUSHVILLE SCHOOLS.

THE VENERABLE BEDE.

JUST twelve hundred years ago, a young lad named Beda was admitted into the monastery of St. Paul at Jarrow in Northumbria. Although only ten years of age, the boy had already been three years with the monks of Wearmouth, instructed and cared for by the zealous Benedict Biscop. When the new monastery at Jarrow was completed he was transferred thither, in order that he might enjoy the superior advantages which it afforded. "There," wrote he, many years afterward, "I spent my whole life; and, although attentive to the rule of my order and the service of the Church, my constant pleasure lay in learning, or teaching, or writing."

It is interesting to inquire what sort of education the boy received in that darkest age of the world's history. England was at that time emphatically a new England. But little more than two centuries had elapsed since the first Englishmen—sea-farers and marauders—had settled upon the island. Christianity had been known among them not longer than the life of one generation; and the people were, for the most part, Christians only in name. Upon the continent of Europe, where the new religion had prevailed a much longer time, the human mind had reached

its nadir, so to speak ; it was impossible for men gifted with strong intellectual capabilities to sink lower in the scale of barbarism. That was the period of the world's midnight ; the civilization of the ancients had faded away and been forgotten ; the dawn of modern intelligence and enlightenment was yet centuries in the future. The grossest mental darkness prevailed everywhere ; superstition was rife, and ignorance was deemed preferable to knowledge. The schools which had flourished during the Roman supremacy, had long since disappeared. Secular learning of every kind was discouraged and even forbidden. The only persons who were in any manner educated were the priesthood ; and even among them, a knowledge of the sciences and the classics was extremely rare. The few schools which were in existence, were connected with the monasteries ; and the instruction given in them pertained almost exclusively to the dogmas of the Church.

But Beda's patron, Benedict Biscop, although one of the most zealous of priests, was no narrow-minded ecclesiastic. He had made three journey's to Rome, and each time he had returned with a collection of Greek and Latin books, the works of the master-minds of a by-gone civilization. These books, little valued and, indeed, forbidden in Rome, were made the nucleus of a library at Jarrow and afterwards at York. They were of inestimable value to the student Beda ; and many of the works which he produced in later life attest their influence upon his modes of thought and expression. But the good abbot, Benedict, suffered nothing to interfere with the religious instruction of his pupil. He detailed a monk, one Trumberct, to have a constant, hourly care for the spiritual welfare of the boy, and to instruct him in all the dogmas and usages of the Church. He had enticed another monk, John the chief-singer in St. Peter's Church, from Rome ; and to him he entrusted the musical education of his favorite ward.

It is possible that Beda's first knowledge of the sciences was derived from a series of treatises known as the *trivium* and *quadrivium*, which were supposed to contain all that was worth knowing of these subjects. The *trivium* included grammar, logic and

rhetoric; while the *quadrivium* embraced arithmetic, geometry, music, and astronomy. An old Latin couplet, designed to aid the memory of students, thus briefly defines these branches of learning :—

“Gramm. loquitur; dia. vera docet; rhet. verba colorat;
Mus. canit; ar. numerat; geo. ponderat; ast. colit astra.”

These text-books were remarkably brief. The most ardent advocate of primers and “thin books,” now-a-days, could not complain of them on that score. The arithmetic embraced but little more than two folio pages, and contained only a few definitions and some superstitious notions relative to the properties of numbers and figures. The geometry included two pages, and contained nothing but the simplest axioms and rules. The grammar and rhetoric were equally brief. The logic, which was the most complete of all, extended to sixteen folio pages. These books, too, it must be remembered, were written in Latin. The language of Englishmen was without a literature—without a book of any kind. Eight hundred years elapsed before men began to believe that the English language was a fit vehicle for the expression of scientific facts and theories. What wonder, then, that twelve hundred years afterward, a “finished education” is acquired only by long attention to Greek and Latin, while our own language and literature are comparatively neglected? Man is a conservative creature.

Considering the age in which he lived, Beda's opportunities for obtaining an education were, perhaps, exceptional; yet, compared with those which the youth of the present day enjoy, they were exceedingly limited. But he persevered, and did the best with the means at hand. While still very young, he began to teach. The fame of his learning and of his skill as a teacher, spread not only over England but to the continent. Monks and young men flocked to him from all quarters, eager to listen to his instructions. Six hundred pupils gathered around him, and the monastery of Jarrow became the first great English school. While performing the two-fold duties of schoolmaster and priest, Beda suffered nothing to quench his ardor for the acquisition of learning. He succeeded in obtaining a fair acquaintance with

Greek and Hebrew, and a vast fund of knowledge relating to every science then in existence. Of astronomy and physics, music, grammar and arithmetic, physiology, rhetoric, and medicine, no man then living knew more than he. The foremost scholar of the age, the first English schoolmaster, he gained the right to be styled "the father of English learning." His industry was remarkable. In the intervals of teaching and studying and preaching and performing the services of the Church, he found leisure to write many books. Forty-five works are known to have been written by him. These works embrace a variety of religious commentaries, homilies upon certain portions of Scripture, historical memoirs, and crude treatises upon scientific subjects. They are largely compilations from the older Latin writers, and but few of them exhibit any originality of thought or independence of argument; yet they indicate a variety of learning, an extent of research, and an acquaintance with books, which, for that age, was truly wonderful. Beda's knowledge of the ancient classics is shown in the quotations from Plato and Aristotle, from Cicero, Seneca, and Lucretius, with which his writings are frequently embellished: and in a charming little eclogue which he wrote on the coming of spring, he even ventured to attempt an imitation of Virgil.

With but a single exception, Beda's works were written in the Latin tongue, for there were no readers in any other language. His greatest work, and the only one which proved to be of special value to succeeding ages, was his *Ecclesiastical History of the English Nation*. This was, in reality, a history of England from the earliest Anglo-Saxon times to his own, based upon such information as it was possible to obtain from general inquiries, from tradition, and from the scanty records then in existence. It possesses more than ordinary interest to the English student from the fact that it was the first history of England ever written, and that it is the source from which has been derived almost all our knowledge of the century and a half immediately succeeding the introduction of Christianity among the Anglo-Saxons. It was completed in the year 731. "It was," says an English historian, "the work of a true scholar, breathing love to God and

man; succinct, yet often warm with life; business-like, and yet child-like in its tone; suited admirably to the wants and to the capabilities of those for whom it was written."

Living, as he did, midway between the old civilization and the new, the intellectual vision of Beda was not clear enough to distinguish the far-off modern awakening, nor did he hope for better things in the future than had been in the past. In his work entitled *De Sex Aetatibus Mundi*, he divides the history of the world into six periods; the fifth of these, which extends from the return of the Jews out of Babylon to the birth of Christ, he calls the period of the world's old age; but the sixth, which is the present, he describes as *atlas decrepita totius morte saculi consummanda*.

It is in his translation of the *Gospel of St. John*, completed in 735, that Beda appears to us as the first writer of English vernacular prose. The story of the writing of this first prose book in our language, as related by Cuthbert, one of his pupils, is full of pathetic interest:

As the season of Easter was drawing near, the zealous scholar and teacher began to feel symptoms of approaching death. But he continued faithfully the performance of his daily duties, and suffered nothing to distract his attention from his accustomed labor, or to abate his usual cheerfulness and good humor. Now and then, while in the midst of his labors, with his pupils around him, he would sing some verses of an English song—"rude rhymes that told how before the 'need-fare,' Death's stern 'must go,' none can enough bethink him what is to be his doom for good or ill." "We never read without weeping," writes Cuthbert.

And so the anxious days passed, and Ascension week drew near, and both master and pupils toiled with increasing zeal to finish, if possible, the work in hand—the translation of *St. John's Gospel*.

"Learn with what speed you may," said the dying man; "for I know not how long I may last. I do not want my pupils to read a lie, or to work unprofitably and without purpose when I am no longer with them."

The last day came, and his pupils stood around him.

"There is still one chapter wanting," said the scribe, seeing the master's increased weakness.

"It is easily written," said Beda; "take thy pen, and make haste."

They wrote until the eventide drew on. Then the scribe spoke again:

"There is now but one sentence to write, dear master."

"Write it quickly," was the response of the dying master.

The pupil wrote:—

Witodlice othre manega thing synd the se Hælend worhte; gif the ealle awritene wæron, ic wene ne mihte thes middan-eard ealle tha bec befon. AMEN.

"It is finished, now," he said.

"Thou hast well said," faintly replied the master; "all is finished now. Support me while I go to the holy place, where I can pray to my Father."

His sorrowing pupils complied with his request, and, supported in their arms he chanted the solemn "Glory to God." With the last words of the song, his breathing ceased, and his soul passed peacefully away.

Such is the story of the first English schoolmaster and of the beginning of our literature. The humble translation of the *Gospel of St. John*, completed under circumstances of such painful anxiety, and amid the gathering shadows of death, was the vanguard, so to speak, of that long procession of noble works which, for more than a thousand years, has been contributing to the development and the glory of the English nation.

Beda was "the first among English scholars, the first among English theologians, the first among English historians"; he was the founder not only of English prose, but of mediæval history. On account of his calm and gentle nature, the humanizing character of his pursuits, the holiness of his life, he is best known by his honorable surname **THE VENERABLE BEDE**. It was, probably, in his capacity as a teacher—as the first English schoolmaster—that his influence over his own generation and that which succeeded him was most directly exerted and most strongly felt. The world has seen but few men so able and every way so admirable.

THE ENGLISH LANGUAGE.

SOME SUGGESTIONS FOR LESSONS IN ENGLISH COMPOSITION.

BY E. E. SMITH, PURDUE UNIVERSITY.

In the September number of the *Journal* the writer presented some views upon "English Instruction in our Public Schools." He has been requested to present methods by which these views can be put into practice—or at least be subjected to the test of the school machinery and of the child-mind. Within certain limitations only can this be done. No method or methods can take the place of local discretion, tact, and skill on the teacher's part. The following exercises are not expected to relieve the teacher from labor, or to change any automaton into a living, stimulating, and productive force. They are intended solely as suggestive; if they be such, they serve their purpose. If they be not such, we are satisfied that it is not because of any defect in the principles upon which they are based, but because of a lack of ability in the writer to indicate a proper method for their development.

I. GENERAL PRINCIPLES.

1. The child should be taught to make language and to use it properly before being called upon to classify or to judge its parts; its synthesis before its analysis; the art of its construction and forms before the science thereof.

2. Since language, at its best, is but an imperfect instrumentality of ideas and thoughts, training in its forms and use should be made part of every study and recitation in the school course, and should extend, in time, from the period of the pupil's entrance into the public school till his graduation from the university.

3. Reading, Spelling, and English (language or grammar), whilst valuable as branches for the cultivation of the memory, are more valuable as branches for the cultivation of the imagination, and, later on, of the understanding, the emotional nature, and reason.

II. METHODS.

1. CONVERSATION AND QUESTIONING. a. Objects.

- (1) To establish a friendly relation between teacher and pupil.
- (2) To inspire the child with confidence in itself.
- (3) To show the child its ability to think and to do.
- (4) To place a responsibility by requesting work as soon as the child has self-confidence from a consciousness of its powers and its ability to use them.

b. Principles.

- (1) The child acquires speech largely by association and imitation.
- (2) Indirect instruction should precede direct instruction.
- (3) All instruction should begin where the child's knowledge ends.
- (4) The training should include work partly within and partly just beyond the child's power, so as to fix what is known, to gradually make more clear that which is partly known, ("now through a glass darkly, then face to face,") and to develop its mind by exercise.

c. Method—Oral.

(1) The child begins composition when it begins talking. It takes pleasure in telling. It should be encouraged to have something to tell. Opportunity should be afforded it to tell. It should tell in its own way. Illustrations: "What have you?" "What did you see?" "What does Mary take?" "What can you see?" "What can a pig eat?" Require the answer to be complete; as, "I have a book," "I saw a bird," etc.

"Did John and Susie run at recess"? (*Ans.*—John and Susie ran at recess. Do not receive *no* or *yes*.) "Can boys catch rats?" "What can boys do?" (*Ans.*—Boys can run, boys can play, etc. Do not receive "run," "play," etc.) "What did girls do yesterday?"

(2) The child talks by imitation. The teacher should use correct language and pure speech. He should require these from the older pupils at all recitations. "The teacher thou gavest me" should not be responsible for a corrupt tongue.

(3) The child possesses curiosity and a language-forming instinct. Simple objects that will arouse curiosity may be presented.* Encourage each child to ask questions. If the question is too vague, *kindly* suggest the fact, and let the child make his question with a definite point to it. Let the teacher's questions have points and on the right end. When so much is given (about a picture, a beef's eye, a mouse, a toad, etc.), as is discreet, see who can tell the most that has been learned, said, etc.

(4) When incorrect language is used, as "I seen its eyes," "John and Mary says"; ask if "I saw its eyes," "John and Mary say," is not a better way to say these things. Who will try to say them the better way hereafter?

(5) Make use of the law of variety for interest in stimulating the child's intellectual growth. Such questions as seem best about the following things may be asked, to awaken observation and lead the child out of its state of ignorance through its natural disposition to activity:

- Playthings; pets; pictures.
- Things seen on the way to school.
- Things seen in the school-room.
- Pictures in the older pupils' books.
- Things accomplished by pupils.
- What I can see.
- What I can hear.
- What I can do.
- Where I can go.
- How I can go to town, country.
- When I can go to town, country.
- What horses can do.
- What squirrels eat.
- What becomes of the rain?
- What is corn used for?
- What makes night come?
- Where do the stars go?

After a child has given several answers to any one of these queries, each in a simple sentence, get it to see if it can not say the same with fewer words. If it can not, suggest how. When the knowledge of the class is exhausted, add so much as may be

interesting and entertaining. Then see who can remember the most at the next talk. Make the talks *brief*. Stop before they tire the pupils.

(6) The language lesson may be an agreeable substitute for the ordinary chart or First Reader lesson, may be given before school begins, out doors at recess, after a short reading lesson, etc., but at no time as a task.

(7) After some confidence, ease, and interest are obtained, such questions as the following may be given one day, to be thought about, talked about at home, or with each other, and answered next day, with reasons:

Would you rather have a pony or a pet goat?

Would you rather go fishing or go nut-gathering?

Would you rather play ball or play marbles?

Would you rather be a bird or a girl?

What can a boy do that a pony can't do?

Can a kitten do more things than a girl?

Would you prefer to have a little party of your own, or to go to some one else's party?

An effort should be made to get the little folks aroused and eager (1) to say as much as each can, (2) to see who can say the most without help, (3) to see who can say the most without making any mistakes, (4) to see who can remember best the things told or read the day before, (5) to see who can tell the most things the teacher does (purposely) in two minutes, etc.

(8) Keep steadily in view that *the fact of saying* and *the form of saying* are more important than the substance of what is said at this time. Keep also in view the fact that the child's language and mind will grow at this time in spite of you, and with a tendency to grow harmfully, and anything you may do to get it to grow rightfully by this work, is so much gained. The child should be given no formal rules, but simply encouraged to say the right form because it sounds better, is better, is more elegant, etc.

(To be continued.)

TEACHING.

A TEACHER teaches when he causes the pupils to exercise their own powers in the acceptance and use of knowledge; when he makes sure that the truth he teaches takes effect. In doing this the teacher must secure obedient attention. The obedient intellect, the obedient heart, the obedient will, always come into harmony with the truth taught. The teacher should, therefore, seek to apply the truth effectively,—

1. To the pupil's *perception*;
2. To the pupil's *imagination*;
3. To the pupil's *memory*;
4. To the pupil's *reason*;
5. To the pupil's *affections*;
6. To the pupil's *will*;
7. To the pupil's *daily life*.

Knowledge may be like cloth on a shelf, or knowledge may be like cloth made into a coat; but he makes the best use of knowledge who takes the cloth, measures the pupil, fashions the garment, and sees that the pupil wears it, and that it is to him a protection and an ornament.

To teach is to arrest and arouse a mind, and set it at its legitimate work.

The legitimate work of mind is to think—to think with a wise purpose.

It is the business of the teacher to set the mind of his pupil to THINKING.

1. Thinking—to *feel its need of truth*.
2. Thinking—to *explore old truth*.
3. Thinking—to *find new truth*.
4. Thinking—to *grow by truth*.
5. Thinking—to *make a wise use of all truth*.—*Ex.*

PRIMARY DEPARTMENT.

[This Department is conducted by LEWIS H. JONES, Prin. Indianapolis Training School.]

PRIMARY READING.

THE general plan of employing the word-method, indicated in the last Journal, serves, with slight necessary modifications, for the teaching of a sufficient number of the simpler words to set the pupils to reading short lessons from chart, blackboard, or reader. The plan embraces essentially the following steps :

- (1.) Teaching, by picture, or real experience of some kind, the meaning of a word.
- (2.) Teaching the spoken form (name) of the word.
- (3.) Associating this idea (meaning) and this spoken name with the printed form of the same word.
- (4.) Much practice in finding such word in a miscellaneous collection of printed words on a chart, or arranged by the teacher on the blackboard, and in telling its name and meaning. This last exercise is for the purpose of making his knowledge permanent and *ready*.

If the word to be taught is an adjective instead of a noun, reach its meaning through some personal experience of each pupil. For example, if the word be "sweet," or "sour," let the pupil taste an appropriate object, a lump of sugar in one case and a lemon or a sip of vinegar in the other, and then teach the spoken name and the printed form of such word by the exercises before specified. If the word be "cold," a piece of ice may be made the means of awakening its meaning, before its presentation as a printed form.

It is not necessary that the meaning of *all words* should thus be taught before the name and form are taught ; but only enough to ensure the *habit* in the pupil of viewing a word *as the sign of an idea*. There are many small words needed by the child in his first reading lessons whose meaning is difficult to teach ; and many others whose use in the sentences in which they are found

will sufficiently explain to the child their meaning. In both these cases it would be a waste of valuable time to teach the meaning first. The class of words referred to are sufficiently indicated by the following examples: "This," "that," "here," "are," "is," "her," etc., etc. When words are taught thus *without the meaning*, the teacher will have to *double the drill in the hunting exercise*, to insure the memory of what is thus taught somewhat arbitrarily.

It is believed that enough has now been said to indicate to even the inexperienced teacher how to proceed so far as the reading of the simple sentences of the chart, or the first lessons of the reader; and if the work has been faithfully and skillfully done, pupils will read the lessons composed of the words now learned, easily, naturally, and with a real interest. While continuing to do some work by the word-method, the teacher is now ready to turn her chief attention to the a-b-c-method.

The a-b-c-method in its utmost simplicity consists of the teaching of the printed form and the oral name of each of the twenty-six letters of the alphabet, and the application of this knowledge to the pronouncing of new words, through the process of oral spelling. The help thus afforded to the child in pronouncing the new words of his lesson, has been greatly over-estimated by those who have used this method wholly; and it has frequently been under-estimated by the champions of the word-method and the phonic-method. The analysis of the subject given in the closing part of this paper will, it is believed, help to set the matter in its true light.

In the early work of the word-method, the pupils naturally and incidentally learn the forms and names of many of the separate letters. This is so much clear gain, and should be recognized by the teacher. The first attempts at direct instruction, should be carried on in the form of the "hunting exercise." Its plan is almost identical with that indicated with the words, except that separate letters have no meaning, except sounds, and these are not now to be taken into consideration. Therefore the drill in searching should be spirited and thorough, so that the resemblances and differences of form shall be definitely seen, and the interest in associating *form* and *name* shall be intense.

Proceed somewhat as follows: Refer to a letter, as b, and call for its name. If no one knows, say very distinctly, "This is letter b." "What did I say this is, Jimmie?" Accept the answer, "Letter b," or "b." Let others speak its name, while they come forward and point to it. Be sure that b is printed many times in the collection of words and letters used. "Now, who can find b in another place on the chart (or blackboard)?" "You may try, Susie." Susie does so, and many others are ready to follow. When many are taught, the exercise can be greatly varied. Teach new letters, and then review all that have been learned. Keep pupils busy in passing to the chart, and reciting in some such form as, "I have found b," or "This is b."

A few such drill-lessons will teach all the letters, except possibly such letters as b, d, p, and q, which may by dull pupils be confused with one another on account of their marked resemblances. Show their resemblances, and *emphasize* their differences by printing them in the presence of the pupils, and by talking of these differences. Show that each is composed of a "stem" and a "curve"; that b has the curve on the *right* at the *bottom*, and d, on the *left* at the *bottom*; that p has the curve on the *right* at the *top*, and q, on the *left* at the *top*. Now, have a special exercise in pointing, and the end is accomplished.

Oral spelling by letter is saying the names of the letters which compose a word in the order of succession in which they occur in it, beginning with the left. Many other incidentals are often attached to this process; as, pronouncing the word before spelling it, or afterward; syllabifying it, etc. In order to see how far the spelling process helps the child in pronouncing the new words of his text it is necessary to analyze carefully the names of the letters into the sounds which compose them.

The name of the first consonant letter is "Bee." This name as spoken consists of the usual (only) sound of b, and the regular long sound of e. When therefore the pupil says "Bee," he *does* speak the sound which b properly has, but *connects* it closely with the other sound making up the word. If he were to *spell* the word "bat," he would say "Bee-A-Tee." Now, if he *were* to say (pronounce) the word from what is still ringing in his ear

(present to his memory), he would pronounce it in one of three ways, dependent on where he happened to *place the accent*: Bee-A-Tee', or Bee-A'-Tee, or Bee'-A-Tee. But the teacher comes to the rescue, and tells him to call it *bat*, i. e., he omits the regular long sound of e from both "Bee" and "Tee," and preserves only the proper *sound* of each of these letters. As these sounds are still present to the memory of the child he makes this analysis with the help of his teacher at first, and in many repetitions, and gradually gains the power to do so for himself in all cases of the use of Bee and Tee.

The case is a little stronger with Em and En; for here the proper sound is *last* in the name, and therefore lingers more fully in the memory, and is more readily disentangled from its accompanying sound. It is plain from this analysis that the helps gained by the child in oral spelling by letter, over what he gains by the word-method, is slight in any particular case; but it is here to be remembered that oral spelling by letter can be carried on *rapidly*, when the letters have been well learned, and that a *feeble influence oft repeated* produces an astonishingly large effect in the end.

The analysis of the vowel letters in respect to the same influence is more difficult, and will be reserved for another paper.

PRIMARY NUMBER.

COMBINATIONS IN ADDING.

THE excellent article in this department of last month's Journal emphasizes the fact that accuracy and rapidity in adding are the results of *memory*. Memory in its best forms is brought about chiefly through three agencies; viz., *clearness of the ideas on first presentation, proper association of ideas under their logical relations, and repetition*, i. e., *drill*.

The constant use of objects for illustration in primary number lessons, secures the first; it is the purpose of this paper to show how to secure the second and third during the first work in adding.

After pupils have become familiar with the numbers to 100 by their concrete lessons with objects, and have had some exercises in abstract adding, arrange tables which begin to evince some suggestion of law and order among addends and sums. The following may serve as a suggestion :

1	11	21	31	41	51	61	71	81	91
2	2	2	2	2	2	2	2	2	2

Place this table on the board and make a class drill upon it. Have pupils recite upon it somewhat as follows: "One and two are three." "Eleven and two are thirteen." "Twenty-one and two are twenty-three." "Thirty-one and two are thirty-three." Write the sums in each case till the entire table stands thus:

1	11	21	31	41	51	61	71	81	91
2	2	2	2	2	2	2	2	2	2
3	13	23	33	43	53	63	73	83	93

When pupils are convinced by the truthfulness of these results, begin to have them examine the table for the sake of discovering the law which controls the endings of the sums. Question thus: "To what is two added here"? referring to the first addition. "To one." "And what is the sum"? "Three." "To what is two added here"? pointing to the second place. "To eleven." "And what does the sum end in here"? "It ends in three." Question thus through for each case. Then say, "In what does each of these numbers end"? referring to 11, 21, 31, etc. "Each ends in one." "What number have we added to each of these numbers ending in one"? referring to the number two as it occurs successively in the table. "We have added two." "In what number does the sum end in each case"? referring to 13, 23, 33, 43, 53, etc. "The sum ends in three." "This will always prove true; when two is added to numbers ending in one, the sums end in three."

Reverse the table as follows: $\begin{smallmatrix} 2 \\ 1 \end{smallmatrix}$ $\begin{smallmatrix} 22 \\ 1 \end{smallmatrix}$ $\begin{smallmatrix} 22 \\ 1 \end{smallmatrix}$ $\begin{smallmatrix} 42 \\ 1 \end{smallmatrix}$ $\begin{smallmatrix} 62 \\ 1 \end{smallmatrix}$, etc., and obtain statement, "When one is added to numbers ending in two, the sums end in three."

These laws are not of much service with numbers so small as one and two, because pupils can so easily count out the result; but the advantages are manifest in the case of the larger ones.

The discovery of the law should, however, be commenced with small numbers, and the practice of counting fingers, lines, etc., be early discouraged. Objects should be used in first lessons in numbers, for the sake of *clearness*; but great harm is done by allowing the pupils to use them in adding, after they should be using the abstract numbers (concepts). If the pupil is allowed to count fingers, lines, or sticks, or is allowed to tap on his slate, all his adding is resolved into the adding of *ones*, and that only in the concrete. The learning of the tables here suggested, together with the law of their endings, turns the whole process into a memory exercise under the control of the laws of association. It enables the child to add at sight any two numbers without resorting to the slow process of counting. When these tables are learned, introduce the plan so clearly outlined by Mr. Ginn in last month's article, and the problem of accurate and rapid adding is solved.

Further examples of tables are as follows:

3	13	23	33	43	53	63	73	83	93
2	2	2	2	2	2	2	2	2	2
2	22	32	42	52	62	72	82	92	
3	3	3	3	3	3	3	3	3	3
3	33	43	53	63	73	83	93		
4	4	4	4	4	4	4	4	4	
4	14	24	34	44	54	64	74	84	94
3	3	3	3	3	3	3	3	3	3

Each table must be drilled upon until its law is plainly seen and thoroughly remembered.

Then problems, and long columns for adding, may be so arranged by the teacher that only the combinations already taught will occur. These problems serve for class drill, and for the study hour as well.

MORAL INSTRUCTION IN THE FIRST GRADES.

THE opening exercises of the school ought to serve the purpose of developing in pupils an intelligence on questions of conduct, and of developing in them right emotions. The form which these exercises should take depends much upon the age of the pupils,

and upon the surrounding circumstances. Wherever possible, singing should form a part. Then the Lord's Prayer may be repeated by teacher and school. If done reverently, it can scarcely fail of good; if done carelessly, it were better left undone. Take the next few moments for the teaching to the whole school a short saying, a pithy maxim, or a noble sentiment. Explain it briefly, and in interesting ways; never make the exercise a dull one. Have all repeat it, then a few individually. Sing another short song. Repeat with the school two or three sentences from the scriptures. Let these be short, and of a devotional character. For example, the opening sentences of the twenty-third Psalm: "The Lord is my shepherd; I shall not want. He maketh me to lie down in green pastures; he leadeth me beside the still waters. He restoreth my soul: he leadeth me in the paths of righteousness for his name's sake."

The whole has occupied but ten minutes, but the school is in better mood for work than it is possible to have it without something of the kind, and the seeds of character have been sown.

At another time use the occasion for a story,—some story of human action done nobly for worthy purpose. Moral questions need to be studied by children in *the concrete*; and the story of human action thus presents it. The story is the open avenue to the child's affection. True, the ordinary accompaniments are the fireside and the family. "Once upon a time," brings the children to the knee. But the story well read, or better, well told, is a powerful means of enforcing order and of developing character in the school-room.

THE thoughtful teacher's aim will be to cherish John Smith the bud into John Smith the blossom; not to turn John Smith the rose into John Smith the fir-tree. In other words, the teacher will try to make the most of the child's special nature, but not to squeeze it into the shape of some fixed model.—
Buxton.

DEPARTMENT OF PEDAGOGY.

This Department is conducted by GEO. P. BROWN, President State Normal School.

—:—
“WE LEARN TO DO BY DOING.”

THIS statement admits of a two-fold interpretation. One is true, the other, false. It is not therefore a good aphorism, and should be avoided in a scientific discussion of the Art of Teaching.

Let us examine it. The statement is true, when interpreted to mean that a full and adequate knowledge of a process results only from an actual performance of the process so many times repeated as to make it familiar. In this case practice is seen to give clearness and distinctness to our theory.

Every process is a double-sided unity,—a knowing and a doing,—a theory and an art. The two are essentially one. Practice is the concrete phase of theory. The knowledge,—the succession of ideas that constitute the process,—is the essence of the process. The concrete, objective expression of those ideas is the objective phase of the subjective essence. It is educationally valuable because by this actual “doing” the knowing is made more perfect. If the process is a physical one practice of it accustoms the muscles and nerves to a form of action corresponding to the ideas which direct the activity. A habit is formed; a memory is established in the physical organs, which results in skill in execution. A clear apprehension of the ideas involved in any process is knowledge of the process. In so far as the actual, objective execution of the process aids to make these ideas clear,—in other words, gives a clear knowledge of the theory,—thus far it is true that “we learn to do by doing.”

But the statement is false when it is interpreted to mean that by merely doing we gain an adequate knowledge of the ideas involved in the process. What is learned by the doing merely, is a series of physical movements. These may or may not have an idea behind them. The real significance of these separate movements may or may not be seen. He who learns to do by doing remains ever the artisan. He is the bond slave of prece-

dent. He can perform the particular process which he has learned, but he is without freedom in that performance. His process is the expression of a theory, but it is the theory of some one else, not his own. He can not interpret his own work. There are those who make frequent use of the injunction, "Learn to do by doing," who do not put any other meaning into it. Such persons can never really *learn to do by doing*.

But there is another class who put still another meaning into the phrase. They believe that the real thing to learn is the *theory* of the doing, and that the road by which this must be learned is by *practice* in the doing. So they set themselves, or if they happen to be teachers, they set their students to work to discover the theory by the way of the art. This is the method of nature they say; the method by which the race has discovered science.

I was reading recently a report of an intelligent visitor of a western normal school, which school is held by many to be the modern Mecca of all devout pedagogues. I judged from this report that in this school the students were "to learn to teach by teaching." So they are set to teaching for a certain length of time each day. At the end of that time they pass to another room and submit to criticism by that portion of the class who did not teach, but were watchful observers of the teaching done by the others. This criticism seemed for the most part pointless and of small significance. It could not well be otherwise, for want of a basis. An older member of the class who had seen some years' service as a teacher, criticised the critics for these aimless and baseless criticisms, which were made without any recognition of principles which should control the development of the lesson and form a standard by which to judge of it. To this the principal of the school promptly replied, "A good point and well taken, but my object is to have you learn these laws and principles by yourselves."—"You are to learn to do by doing," he said in another connection.

They are to learn the theory of teaching by groping in the dark for the ideas which compose it, unaided, except by the scintillations of light that may be thrown upon the chaos by experience and the example of others.

This interpretation of the phrase, "learn to do by doing," is at present a popular one. It is "following the order of nature";—it is the "method of science";—it is the "inductive method." Now any one of these catch phrases is potent above all argument. The method of science is the method *par éminence*, and to question its universal application is to stand athwart the path of progress and write one's self down a foggy.

But the earnest foggy believes that the truth must be told if the heavens fall. He dares to stand athwart the "path of progress," which is often but another name for the path of the hobby-rider, and call upon this rider to dismount and look and see how things appear when standing upon the solid earth. The point of view greatly affects the appearance of a thing.

The "Scientific Method" is just now a hobby, and the number who are riding it or trying to mount it, inside and outside the schools, is legion. This method, as it is interpreted by these "reformers," is that every learner of any art or science must follow the method which the human race has followed in the construction of that art or science. The race groped for generations constructing first the art, and after a much longer period the science or true interpretation of the art. It is held that each individual must in like manner grope for a corresponding number of years of his natural life in a similar way in order to come by a knowledge of what the human mind has thus constructed. It is claimed that this groping is a strengthening process, developing the power of independent thought and preparing the way for independent action.

But it would be a sad reflection to conclude that the experience of the race is to be of no help to me; that this great inheritance of knowledge which I have thought to be my birth-right is really of no value to me. That for any purposes of culture, I might as well have lived in pre-historic times as now. There is no ground for the assumption that I must follow the same process in learning that the race pursued in constructing. If so I must needs come through Alchemy to Chemistry, and Astrology to Astronomy, and Paganism to Christianity. It is a principle of

growth that all organisms grow by exercise, and the assimilation of nutriment. But is it not probable that there has been improvement in the nutriment and exercise of the spiritual powers, as well as in the exercise and nutriment of the physical organism? We do not learn what to eat by going through the experience of the race in the preparation of food. There is no valid reason why I must learn what the race has found out in the realm of thought, by following the process by which they found it out. The chief requisite is that the two prime conditions of growth be realized, viz., exercise and proper nutriment. The application of this plain truth to the education of teachers requires that the laws and principles which form the science of teaching, in so far as they have been discovered, be used as a basis of criticism from the start. This is the intellectual inheritance of every teacher, into the possession of which he should be allowed to enter at once. His first business is to learn what others before him have discovered. This he can do most rapidly and truly by a practical and conscientious application of these principles in the practice of teaching;—by criticism having these principles for its basis;—and by observation and criticism of the work by others. In this practice we shall find both the needed exercise and nutriment for a satisfactory growth in knowledge, and a great saving of energy which otherwise runs to waste in vain processes and needless emotional excitation. The critic of the critics was right. It is at too great a cost that the pupil-teacher "learns the principles of teaching by himself." He has a right to be helped to these, and thus be helped to form a standard of criticism for his own and others' work. There is an inexhaustible field for original activity in the varied application of these principles in the practice schools. After the student has found out what is already known he is prepared for original investigation and discovery. Not before.

G. P. B.

DISCIPLINE.

TAKING up the thread where we dropped it in the July number, we remark that Discipline is that process by which power is acquired. Considered as a product it is the power acquired by

the process. The purpose of school-instruction is two-fold;-- (1) to give power, and (2) to give knowledge.

What is the disciplinary value of the respective studies taught in the schools? This is a question which every thoughtful teacher would be pleased to be able to answer to his own satisfaction.

School studies may be divided into two general classes, the Science studies and the Language studies. This classification will not include History, Geography, or Art. Their educational value will be considered separately. Science studies serve to educate the intellect. Language studies cultivate what Matthew Arnold calls the "sense of conduct and the sense of beauty." Science constitutes what has been called the "Literature of knowledge." Language and Literature are the chief sources of power.

Sciences are divided into two classes, the Organic and the Inorganic. The Inorganic Sciences have been divided into two classes, viz., (1) those that treat of the properties and laws of quantities, and (2) those that deal with forces and motions resulting therefrom. The different departments of mathematics constitute the science of quantity.

What is the educational value of mathematics?

1. It is the only strictly deductive science. Starting with a few primary and self-evident truths, by a rigidly deductive process the mind is led to the discovery of a vast number of other facts and relations. These, while they have direct relation to quantity, have an indirect relation to all mental processes in which reasoning is involved. The student gets certain truths of general application fixed in his mind.

a. He learns the necessity of a rigid definition for every leading idea in a process of reasoning.

b. He becomes practiced in the use of that instrumental process by which he advances from an acknowledged premise to a conclusion by a series of self-evident steps.

c. He is trained in and made to see the necessity of avoiding all begging of premises or conclusions, and all covert admissions that are prone to steal unnoticed into the thread of an argument and vitiate the entire process.

d. He is taught to stand firmly upon ground primarily chosen and not shift to some other ground in the process of his argument.

e. In like manner he learns to avoid all double use and double meaning of terms, which is the source of so much error in our reasoning about the affairs of social, political and religious life.

2. Besides, mathematics gives a necessary preparation for judging of the affairs of common life by teaching how to deal with a combination of elements that unite to produce a result. It is seen, for instance, that if one factor changes while all the others remain constant, that the result varies as the factor varies. And, too, that there may be such a change in all the factors as to neutralize the effect of these changes and thus not change the result.

It has been affirmed that the entire theory of Probable Evidence has been received from the domain of mathematics.

3. Long demonstrations require such an exercise of continued attention as to form a good training of the will.

These points do not touch upon the commercial value of mathematics. That needs no emphasizing. In the field of the applied mathematics its utility is beyond estimate.

G. P. B.

ENGLISH GRAMMAR.

THE COMPOUND SENTENCE.

THE leading points thus far considered in the series of short articles on English Grammar, are the following: English Grammar is the science and the art of the English sentence. The sentence expresses a thought or judgment. In the thought there are three essential elements; the object of which the mind thinks, expressed in the subject of the sentence; that which is thought of this object, denoted by the sentence predicate; and the relation the mind thinks between these, which is expressed by the assertion. The modifiers of the subject are of three kinds; adjective, possessive, and appositive. The substantive predicate takes the same classes of modifiers as the subject. The attributive predicate takes the objective—direct and remote—and the adverbial modifiers. Those of the assertion are ever adverbial.

This classification of sentence elements and their modifiers, is based directly upon the nature of the thought itself, and is, therefore, universal. No language could by any possibility show other elements or modifiers. No account is here taken of infinitive, gerundive and participial words used as these elements, which, as was noted in a preceding article, retain their verbal modifiers.

It is well to recall in this connection, that the type of all mental products expressed by the sentence, is this simple judgment. A knowledge of the simple sentence leaves but little to learn about the other forms. No matter how complicated the sentence, what it expresses can always be resolved into one or more simple thoughts, and each of these into the several elements given above. The *logic* of the sentence is found through the study and the analysis of the simple form. The compound and the complex types give but little that is different except what arises from the joining of two or more thoughts in one language form.

In studying the Compound Sentence, the attention should be mainly directed to those things that are peculiar to this sentence form. It supposes a knowledge of the simple form, and to this adds three new ideas: first, the relations under which the mind thinks the several thoughts expressed; second, the conjunctive words appropriate to these relations; and third, the abridged forms made by dropping certain elements in the different classes.

The ground of the union of simple sentences into compound is the fact that the mind unites the thoughts under some one of the relations which it employs in its thinking. The basis of this thought union is some *actual* connection between the thoughts. Thus the mind readily unites the thoughts, "Yesterday was cloudy," and "To-day is bright." But no such relation exists between either of these thoughts and "The Atlantic is broad."

The simplest and most frequent of these relations is that of *simple addition*, in which the thoughts are associated by reason of any common element. Any like element, principal or subordinate, may furnish the ground for this association. The conjunctions denoting this relation are such as *and, also, eke, too, moreover*, and others.

A second is that of *antithesis* or *opposition*. The thoughts as

wholes, or in some of their emphatic elements, are set over against each other. In the sentence, "*Faithful* are the *wounds* of a *friend*, but the *kisses* of an *enemy* are *deceitful*," the italicised words show three pairs of opposed elements. Sometimes the antithesis is between one of the thoughts and a thought which is an inference from that directly expressed in the other clause. "It has rained a great deal recently, but the river has not overflowed its banks." The second thought is in direct opposition, not to the first, but to the inference from the first, "The river has overflowed its banks." The English language contains a long list of conjunctions which express this relation in its various shades and degrees. *But, still, yet, nevertheless, however,* are among those most frequently used. No two of these words have exactly the same meaning. The correct use of this class of connectives can be best acquired by a careful study of each of the words to discover the degree of opposition which it is used to denote.

Another relation is that of *alternation*, expressed by such words as *either, or, neither, nor, else,* and others. In some cases the relation is made emphatic by the use of two of these connectives; as *neither-nor, either-or.*

The fourth and most difficult connection between two thoughts is that of *reason* and *conclusion*. It matters little whether such sentences be classed as compound or complex. The point of interest and value is to distinguish the relation from that of cause and effect, with which it is frequently confused, and to be able to use the proper connectives to denote it. Suppose one to know as a fact, that is, by direct or experimental knowledge, that the climate of the Amazon region is moist and warm, and also in the same way that the region has a luxuriant vegetation. He may then unite these thoughts under the relation of cause and effect, and say, "The Amazon region has a luxuriant vegetation, because the climate is moist and warm." The sentence would be complex, the second clause having the value of an adverb of cause. But let the supposition be that he knows by experience only that the vegetation is luxuriant, then he may infer or conclude that the climate is moist and warm. This last is known,

not as a fact of experience, only as a conclusion. Given the knowledge that the climate is moist and warm, the mind will readily infer that the vegetation is luxuriant. We reason as freely from effect to cause as from cause to effect. We infer from recent heavy rains that the river will overflow its banks, or from the fact of the overflow that heavy rains have fallen recently. The distinguishing mark of this sentence is that one of the thoughts, either the cause or the effect, is known only as an inference; while in the sentence of cause and effect, both are known as experimental facts. The difficulty of distinguishing these two classes of sentences is made greater by the fact that most of the connectives that express cause and effect, may also express reason and conclusion; and only a few, like *hence*, *therefore*, and *then*, are restricted to the latter relation. In the sentence, "The crop is heavy because the soil is fertile," it would be impossible to tell, save by the context, which relation was meant, as good usage no longer observes the original composition and meaning of *because* (by cause). And similarly of *as*, *since*, *for*, and others.

The principle of economy in speech leads us to abridge many compound sentences by omitting the common elements in all the clauses but one. "John, James, and Mary are students," is plainly an abridgement of three clauses having a common assertion and predicate. All such sentences can be expanded into the original sentences from which they have been severed. Mr. A. and Mr. B. buy and sell stock and grain," can easily be expanded into the eight simple sentences from which it has been made by this process.

Such abridged sentences are to be clearly distinguished from simple sentences which contain a compound element. These last can not be developed. "A red and a white flower were found." This sentence can be expanded. Not so, "They found a red and white flower," "The tree stands between the house and the gate," and "You and he are well matched."

The punctuation of the compound sentence, that is, the proper use of the marks which separate the coordinate clauses, should always be taught in connection with the study of these relations. But three marks are commonly used, the comma, the semicolon,

and the colon. The rules are so few and so easily understood, that there would seem to be little excuse for the common errors on this subject.

W. W. PARSONS.

ORAL READING—II.

IN the October number of the Journal, four conditions of good oral reading were discussed, viz.: "A good composition"; "Adaptation of the composition to the experience and literary attainments of the reader"; "Mastery of the thought and language;" "A vivid imagination."

The following is a continuation of that discussion :

The presence of the conditions previously discussed produces,

5. *Appreciation ; or right feeling.* "The heart must glow before the tongue can guild."

"Responsively the human features laugh
To those that laugh, and weep to those that weep.
Would'st make me weep? Then thou thyself must grieve,
Telephus, or Peleus; thy words of woe
Then touch my soul: but if thy mandates fail
In aught becoming thy true character,
I laugh, or sleep. Sad features speak sad thoughts;
The frown, of wrath; sweet smiles, of sport and joy;
A serious face bespeaks a serious mind.
For nature forms us *first* within to feel
The changeful lot of life—thrills with delight,
Impels to anger, weighs us down with grief,
And chokes us with keen anguish—then declares,
With voice conformed, her great interpreter,
The changing passions of the fervid soul."

6. *Direct address.* By this is meant the consciousness of reading to the intellect, sensibility or will of another, for the purpose of instructing and convincing the intellect, exciting the feelings or persuading the will. The failure to exercise such consciousness results in a kind of reading which the skillful elocutionist delights to imitate, and which imitation never fails to produce the happiest comic effect. The proverbial school-boy, in reading, assumes a high pitch and quick time; an empty, far-away, stilted tone which varies neither in pitch, time, tone nor force:

the strain is unbroken except when his breath gives out or he runs against a hard word. His voice turns neither to the right nor to the left; it goes neither up nor down; but maintains, through a paragraph or a chapter, the same monotonous level. He aims at nothing and—he hits it. But let the teacher ask him a question concerning what he is reading and, *presto*, all is changed. He throws aside his stilts and walks upon his feet. He employs a lower pitch, uses less force, and his tone is modulated to fit the varying sentiment he now endeavors to communicate to his listeners. He is now exercising *direct address*.

The reading of that form of discourse called soliloquy requires the child to put himself in the place of another and, hence, is useful in cultivating his imagination, but it tends to produce a state of mind unfriendly to direct address, and should be employed sparingly in the earlier stages of the work.

7. *Attention and sympathy of an audience.* The young reader is the embryonic orator; the teacher and class are his audience. The young reader is influenced by the same conditions that determine the success or failure of the orator. There are persons who can speak or read just as well without attention as with it, but they do not read or speak well under any circumstances. Eloquence, especially young eloquence, is sensitive. It is affected by attention and sympathy, or by indifference and opposition, as appreciably as the mercury by heat or cold. If the difficulties in pronunciation are anticipated and removed before the actual reading begins, attention can be held to the thought and feeling expressed. If, while the pupil is reading, a dozen hands are raised to warn him that when he has completed his paragraph a dozen correcting voices will call out in chorus that word he just pronounced, he becomes embarrassed and his expression is correspondingly weakened.

The correction of mispronounced words should be deferred until the lesson has been read. Attention to the spirit of the composition on the part of teacher and class tend to secure to the reader another important condition of good expression, viz.:

8. *Self abandonment; or a full surrender of one's self to the spirit of the composition.* The street gamin, addressing his fellows, may

not use the best language, and may not pronounce the words selected in accordance with dictionary rules, but his emphasis, inflection and other elements of modulation are above the most searching criticism. The child of nature, he speaks as his mother dictates, and she makes no mistakes. Place him in a reading-class, and self-consciousness takes the place of self-abandonment. As remarked elsewhere, expression is determined by the state of the mind at the instant the act is performed. If the mind is absorbed in the thought contained in the composition the expression will correspond; if embarrassment is the dominant feeling the reading will prominently express that. The ingenious teacher will divert the attention of the pupil and the class from the reader to the thought and feeling to be expressed.

9. *A correct ideal of oral expression* is another condition of good reading. This involves a discussion of the various elements of expression, such as pronunciation, emphasis, and modulation.

These topics will be discussed in later numbers.

JOSEPH CARHART.

THE SARGASSOES.

WALTER S. SMITH, FORMER SUPT. MARION CO.

It is one of our recent discoveries, due to maritime science, that the eddy of each great ocean has its sargasso. The eddy is a result of surface currents, whose directions are constantly changed by various influences, as land borders, the earth's rotation, etc., etc. The Gulf Stream is really a part of the Atlantic Equatorial, driven toward the gulf by the earth's rotation along the northeast coast of South America. It enters the gulf from the Caribbean Sea and flows around the western bend of the coast, obtaining within the gulf the momentum of the tropical belt. This is greater than the momentum of the successive belts northward, and the current flows out by the point of Florida with an acceleration of energy, which from the same cause continues diagonally across the Atlantic Ocean toward the East.

The divergence toward the right continues until a large part

of the current finds its way southward along the western coasts of the Old World, completing the circuit by a union with the Atlantic Equatorial, about the region of Cape Saint Roque. This, substantially, tells the story of them all; and there is an equatorial current in each of the equatorial oceans, and two of them are divided into northern and southern, and the other develops a powerful southern, which circles back to Australia and washes its western coast, flowing northwest.*

So there are two great eddies in the Pacific, one in the Indian, two in the Atlantic, and one in the Mexican Gulf, besides numbers in all our Mediterraneans.

It is well known that floating substances, by their inertia incline to leave the swifter and seek the more moderate parts of a current. So, if navigators had not found sea weed by thousands of acres in these eddies, we might know it to be there, as we see saw-dust collect in the middle of a basin when the water is set to whirling. This has indeed been used a thousand times before classes as a means of explaining the sargassoes.

Now, there is nothing much said in our books about these floating masses, except to mention the *sea weed*. But it is very unreasonable to suppose sea weed the only matter accumulated here. What becomes of all the trees, and cabins, and crops, and dead animals carried by swollen streams to the great deep?

Some are blown to land, and some seek the slack water near the land, and find their way out over the surf. But some must float on to the slack water of the eddies, and the sea-weed must have logs and other bodies in abundance upon which it may cling for support.

If this is the case, the accumulation must be annually augmented by fresh supplies from the continental floods.

I have an idea, though I never was there, that the sargassoes grow, and that there is more in this growth than the new crop of sea-weed. They would grow in area, were it not that as time advances the bodies become soaked and sink. Their subsidence, too, is augmented by every storm: for the same action of the wave that lands a body ashore, must throw the lately-arrived masses upon the masses less buoyant and press them down. In

time the accumulation becomes so great as to force the lower strata into the dense water of great depths, and it is there subjected to pressure like that of a mountain.

There have been many learned things said concerning a Carboniferous Age and its various coal products. But curiously enough the coal is found *here* and *there*. That is, the Carboniferous Age may have been universal (in fact, it is almost universal now). But by some awkward mistake of nature, it piled up the coal in limited areas. These areas show signs of having been under the ocean; and I am half tempted to guess they are old sargasso seas.

DOLLARS AND CENTS.

What will this country be noted for hence?
Dollars and cents. Dollars and cents.
What are men striving for hot and intense?
Dollars and cents. Dollars and cents.
What makes our politics reek with offense?
Dollars and Cents. Dollars and cents.
What makes Mr. Gould, though a small man,
immense?
Dollars and cents. Dollars and cents.
What makes our cashiers jump over the fence?
Dollars and cents. Dollars and cents.
What causes crime on the slightest pretense?
Dollars and cents. Dollars and cents.
Why is it stern justice often relents?
Dollars and cents. Dollars and cents.
What more than all shadows tell coming events?
Dollars and cents. Dollars and cents.
What makes you polite to a man of no sense?
Dollars and cents. Dollars and cents.

[*Brooklyn Union.*]

OFFICIAL DEPARTMENT.

TEACHERS' RESPONSIBILITY FOR INJURY TO SCHOOL PROPERTY.—[Letter-book G, page 385.] By section 1510, Revised Statutes, school trustees are permitted the use of school houses for religious meetings and for other purposes. It is not provided that the teacher shall have any voice in the matter. I think the teacher can be required to exercise care in locking the school house and out-houses and making them as secure against injury as possible whenever he leaves the premises, but can not be held responsible for damages occurring during his absence from the premises or when they are not under his control, as when occupied by other persons with the trustees' permission.

WHAT IS A VALID PROTEST—VOTERS AT SCHOOL MEETINGS.—[G, 380.] A protest against a teacher to be binding must be made at a regular school meeting, called and conducted according to law, and by a majority of all the persons entitled to vote at such meeting, not merely by a majority of those present. The persons entitled to vote at the school meeting of a district are all tax-payers, male and female, except married women and minors, who have been listed by trustees as parents, guardians, or heads of families, and attached to such district.

TRUSTEES MUST PROVIDE ACCOMMODATIONS.—Children are entitled to school privileges between the ages of six and twenty-one years. It is therefore the duty of school authorities to admit them into the school at any time after they become six years old, as far as the accommodations provided allow; and if these are insufficient, it is their duty to enlarge them as soon as possible. Till this can be done, preference will of course be given to children in the order of their application for admission.

TRUSTEE'S RISK IN EMPLOYING UNLICENSED TEACHERS.—[G, 370.] If a trustee employs or permits to begin teaching in a public school any person who has not a valid license as required by law, the trustee will be liable on his bond for the misapplication of any school revenue paid to such unlicensed person: and the county superintendent or any interested citizen may bring an action against the trustee to recover for the corporation the amount so misapplied.

PROTEST OF PATRONS AGAINST TEACHER.—[G, 372.] You say the trustee of your township was notified that the patrons would hold a school meeting to protest against a teacher whom he intended to employ, he promised to grant the necessary time, the meeting was

held and protested in regular form against the teacher, but the trustee had meantime employed her. I think the trustee did wrong to employ her, and, as he had notice of the intended protest, such protest when made, rendered the contract void. The patrons are by law entitled to protest against the employment of any teacher. It is the trustee's duty to allow them an opportunity to make their protest in the manner provided by law, and, if he is notified that a school meeting will be called for that purpose, any contract he may make with a teacher will be subject to the action of such meeting.

TOWNS MAY SELECT TEXT-BOOKS WHERE COUNTY HAS NOT ADOPTED.—[G, 375.] It is the duty of school boards of incorporated towns to conform as nearly as practicable to the action of the county board in the adoption of text-books. Towns should not adopt or introduce books different from those adopted by the county board, but in branches in which the county has made no adoption the towns may select books.

COUNTY SUPERINTENDENT'S POWER AS TO COURSE OF STUDY AND RULES.—The management and control of the schools is conferred by law upon the trustees, and this power involves the right to prescribe a course of study and make rules and regulations. But the trustees also appoint a county superintendent, who, in a large department of school government, is the representative and agent of the trustees, and to him their powers are delegated so far as is necessary to successful administration. I think therefore that, if neither the county board of education nor the trustees individually have taken the necessary action, the superintendent may arrange a course of study and direct its enforcement in the schools, and may make reasonable rules and regulations, and the refusal of a teacher to obey the superintendent in these particulars, would be such "neglect of the business of the school" (Sec. 4426) as would warrant a revocation of his license, or would indicate such incompetence "to successfully teach" (Sec. 4425) as would warrant a refusal to grant him another license.

The above are selected from my recent decisions.

JOHN W. HOLCOMBE,
Sup't Public Instruction.

PULASKI COUNTY.—Supt. W. E. Vetherton is raising the standard so rapidly that forty applicants have failed this year to get license, and a large number of teachers had to be imported. This is a good work that will not need to be repeated. There is plenty of "Home talent" with a little energetic application. The superintendent is conducting a vigorous educational department in the county papers

EDITORIAL.

An agent is wanted to raise a club for the Journal in every township in the State. Send for terms.

Persons sending money for this Journal can send amounts less than \$1 in *two* and *one* cent postage stamps; no others can be used.

In asking to have the address of your Journal changed, please give the *old* address as well as the new, naming the county as well as the state.

It will pay every patron of the Journal to read the advertisements this month.

We regret the crowding out of a great number of miscellaneous articles. *Fifty-five* pages for reading matter do not give us space enough.

A FEATURE of this Journal next year will be a series of biographies of the State Superintendents of Indiana. Herbert M. Skinner, the chief clerk of State Supt. Holcombe, is now engaged in looking up material and in writing a biographical sketch of each of the twelve State Superintendents. One will be published in each number of the Journal for 1884, so that the volume will make the history complete. These sketches will doubtless be highly appreciated by all, as they will be very complete. Mr. Skinner does thoroughly whatever he undertakes.

SQUARE YOUR ACCOUNTS.

All good housekeepers have cleaning-up times: all good business men have times when they take an invoice of stock, that they may know just how they stand. These periods of looking back, and around, and forward, and making fresh starts are very important.

The closing of a year is an excellent time for such a review. It is an excellent time for cleaning up and "*squaring up*" and taking an even start. Return whatever you have borrowed, especially those borrowed books. Pay up your little debts "so far as in you lieth." Close up those little unfinished plans; finish those little jobs that have been dragging. *Begin the new year with a clean sheet.*

Teachers, first put this into practice yourselves, and then give a lesson to your children on the subject. It will pay you and them.

VOLUME XXVIII.

With this issue we close the *twenty-eighth* volume of the Indiana School Journal. For the convenience of those who wish to bind the volume a complete index is published. An educational article that is really valuable is worth as much next year as it is this, and should therefore be preserved. The *first* reading of an article is valuable, but a *second* reading, at a time when the school-room experience makes it especially applicable, is still more valuable.

Especial attention is called to this index. The number and character of the subjects treated, and the high standing of the contributors, are worthy of note. Nearly *seven hundred* pages of reading, exclusive of advertising matter, in one volume, is something unequalled in educational journalism.

The editor points to this volume with unusual pleasure, and wishes to renew his thanks for the continued confidence and support of Indiana teachers.

CHRISTMAS PRESENTS.

The custom of giving Christmas presents is a beautiful one, and should be encouraged. It makes children happy and helps to keep older people young. A very little money combined with a little ingenuity can make many little hearts glad.

The purpose of these lines is to make three suggestions: 1. Teachers should encourage the observance of Christmas as a day of merry-making and rejoicing. 2. They should encourage every one to remember the unfortunate on that day, and while they and their friends are having a nice time, to see to it that at least one poor or unfortunate child who may not have money or friends, shall in some way share in the glad day. Urge them to surprise some poor little neighbors with presents of some sort. 3. Suggest that in the selection of presents a part of them at least be of some permanent value. Of course children must have toys, but in addition to these, and for older persons, what can be more appropriate than a good book which will be a permanent friend, or a good magazine or paper which will bring to mind the giver every week or every month of the year.

The October number of the Journal contained a good list of books and magazines from which to choose.

HOW MANY SIX-MONTHS LICENSES?—In answer to the inquiry, "How many six-months licenses may a teacher hold in accordance with the present law," the following information was received from the Department of Public Instruction: "A teacher may receive several six-months licenses in succession, provided no two be received in the same county."

STANDARD TIME.

TWO KINDS OF TIME NOW INSTEAD OF FIFTY-THREE, AS HERETOFORE.—At noon Saturday, Nov. 18th, the railroads of the United States and those of Canada adopted a uniform time standard, as agreed upon by a convention of railroad managers held in St. Louis on the 11th of April last, and another in New York a few days later. The idea occurred to Prof. Cleveland Abbe, of the Signal Bureau at Washington, and his plans were elaborated by Dr. F. A. P. Barnard, of Columbia College. Prof. Abbe proposed his plan as early as 1878. A change somewhat similar to that which is now effected in America was brought about in England as long ago as Jan. 13, 1848. It may not be generally known that the railroads of this country have been conducted of late years under fifty-three different kinds of time, the difference between the times being very slight in some instances, but enough to make people miss trains repeatedly, besides causing other inconveniences.

The time in which the earth revolves upon its axis is divided into twenty-four equal parts, termed hours, and for convenience in measuring distances the distance around the earth from east to west is divided into 360 parts, called degrees of longitude. The surface of the earth, therefore, travels as many degrees in one hour as twenty-four is contained times in 360, or fifteen. From this it is seen that there is a difference of one hour actual time between each succeeding fifteen degrees of longitude around the earth, faster going east and slower going west.

The railroad officials of the Continent decided to adopt as their standard of regulation the time of the Greenwich Observatory. Hence the 60th degree of longitude is four hours slower than Greenwich time; the 75th, five hours slower; the 90th, six hours; the 105th, seven, and the 120th eight hours—thus making five different standards between the Atlantic and Pacific Oceans.

Under the new system there are five divisions of time in North America: Inter-Colonial, embracing Nova Scotia and New Brunswick, but not touching the United States, based on the meridian of 60; Eastern, based on the 75th meridian; Central, based on the 90th meridian; Mountain, based on the 105th meridian; and Pacific, based on the 120th meridian. The 75th meridian passes near Philadelphia; the 90th near St. Louis; the 105th near Denver; the 120th near Carson City, Nevada.

Only those places located on the meridians named can have true local time agree with railroad time. The "zones" controlled by the time of these meridians are of different widths, and the dividing lines are by no means straight. The Central extends from the meridian of 82 to 102, and includes nearly 90 per cent. of all the railroads in

the United States. True Indianapolis time is 16 minutes faster than standard time. St. Louis time is 1 minute slower.

TOWNSHIP INSTITUTES.

Township institutes are a means by which much good is being done. If they are not always profitable it is the fault of the teachers. When the work is properly planned and assigned good must result.

In counties in which the superintendent does not furnish a programme of work, the outline in the Journal can be used, and where the work is planned the Journal suggestions will give variety and assistance.

ANOTHER PLAN

of work is here suggested by way of variety :

Let a teacher ask his scholars to be present Saturday forenoon, and let him conduct his opening exercises and recitations, conducting classes, as usual, thus giving an exhibition of his every-day school-room work. Let all the other teachers in the township be present, with note-book in hand, to observe. In the afternoon, when the children have gone home, let the forenoon's work be taken up and criticised. Each teacher should be called upon for his judgment in regard to each exercise. If he approves he should state why; if he disapproves he should give his reasons.

This might very properly be called the

OBJECT-LESSON METHOD.

The discussions have a definite point. All have seen the exercises, and so have in mind the same thing. A teacher can show his method of conducting an exercise much better than he can *tell* it: and one can see more in an hour than he can hear in a week.

The above plan is not theory: it was practiced in Marion county several years while the writer was school examiner there. It is without doubt *one* good plan, and deserves trial by way of experiment at least.

TOWNSHIP LIBRARIES.—In nearly every township in the state there is a township library. While these libraries have been much abused and many of the volumes have been lost, most of them yet contain some good books. It is the duty of each teacher to become familiar with the books, and then direct the children in their reading. By asking for reviews of books; by assigning topics for composition; by reading extracts; by suggestion and direction, the children will be led to read volume after volume, and with unmeasured profit.

QUESTIONS AND ANSWERS.

QUESTIONS BY THE STATE BOARD FOR OCTOBER.

THEORY OF TEACHING.—1. What preparation should the teacher make for each recitation?

2. Why should whispering not be permitted in a school?
3. What is the difference between characteristic and arbitrary punishments? Illustrate.
4. What is a leading question? Why improper?
5. How would you lead a child to form the conception of a mountain if he had never seen one?

PHYSIOLOGY.—1. How do bones grow?

2. What is meant by the contraction of a muscle?
3. How is the difference in complexion of different persons accounted for?
4. Name five inorganic substances that are important in building up the tissues of the body?
5. What is the physiological action of alcohol?
6. How do the forms of teeth in the different classes of animals, including man, differ?
7. What state of the emotions is favorable to digestion? What unfavorable?
8. What changes take place in the color of the blood in its journey through the system? Why?
9. What is the diaphragm, and what is its office?
10. What are the functions of the spinal cord?

GEOGRAPHY.—1. Define and give an example of a cape; of a peninsula. 5, 5.

2. What pursuits give rise to cities? Name two locations where cities would be likely to grow. 5, 5.

3. Name five great shipping ports of the United States. 5, 2 ea.

4. Name five countries of South America which border on the Atlantic Ocean. 5 pts, 2 each.

5. Describe the two longest rivers of South America. 5, 5.

6. Where is the Black Sea? North Sea? 5, 5.

7. What river of France flows into the English Channel? Which two, into the Bay of Biscay? 4, 3, 3.

8. Name two rivers of Africa which flow into the Atlantic Ocean. Where is the Gulf of Bengal? What does the Strait of Babel Mandeb connect? 10

9. Name the two most extended mountain systems of Africa. What can you say of their height? 5, 5.

10. Name five tributaries to the Mississippi River. 5 pts, 2 each.

- ARITHMETIC.—1. What number added to $\frac{2}{3}$ of $\frac{3}{4}$ of $9\frac{1}{2}$ will make $\frac{1}{2}$ of $\frac{2}{3}$ of 21? 5, 5.
2. Divide 1.728 by 1.2, and give reasons for pointing off decimals. 3, 3, 4
3. What will a pile of wood cost, at \$4.25 a cord, which is 96 feet long, 16 feet wide, and 12 feet high? 5, 5.
4. What will be the cost of plastering a room, sides and ceiling, which is 10 m. long, 65 dm. wide, and 40 dm. high, at 30 cents a s. m., allowing 10% for openings? 5, 5.
5. If $\frac{1}{2}$ bus. of oats feeds 4 horses $\frac{1}{2}$ of a day, how many horses will 9 bus. feed $\frac{1}{2}$ days? 5, 5.
6. A note for \$1,200, for a year at 5% int., is discounted, true discount, at the end of the 8th month, what is the then present worth? 5, 5.
7. How deep must be a malting vat 25 ft. long, 15 ft. wide, to hold as much malt as is held by a cubic vat 15 ft. deep? 5, 5.
8. In a geometric progression the first term is 1000, the ratio $\frac{1}{2}$, the number of terms 4, what is the last term? 5, 5.
9. With a wheel 3 ft. in diameter, and axle 9 in. in diameter, what power will balance a weight of 175 lbs.? 5, 5.
10. I sold wheat at \$1.08 a bus., at a profit of 20%; I afterwards sold a lot at \$31.05, at a profit of 50%; how many bus. in the last lot? 5, 5.

GRAMMAR.—1. What is gender? Give the opposite gender of the following words? *Widow, author, abbot, landlord.*

2. What is the rule for the correct use of *each other* and *one another*? Write a sentence illustrating the correct use of these phrases.

3. Write the principal parts of the verbs *ride, be, go, become, flee.*

4. Write a sentence containing an adverbial phrase and an objective clause.

5. Define subject, predicate, voice, comparison, case.

6. How is the possessive of complex terms formed? Illustrate.

7. Correct and give reason:

"No less than five books were found."

"These sort of grapes are very sweet."

8. Analyze:

"A tender bud,
That tried to blossom in the sun,
Lies without, where the violets blow."

9. Parse the words in italics:

"*Whatsoever* hath been *shall remain*,
Nor *be erased*, nor written o'er again."

10. Write a description of some natural curiosity that you have seen.

U. S. HISTORY.—1. Show wherein the Articles of Confederation, by their inadequacy, made necessary the present Constitution. 10

2. To what five men do we owe special honor for their part in the formation of the Constitution? 2 each.

3. Under what administrations have wars occurred? Name the wars. 10

4. What two laws in the administration of John Adams made him unpopular, and what party went out with him, and what one came in? 2 pts, 5 each.

5. State the circumstances leading to the land purchase by Jefferson, and what States are included therein? 2 pts, 5 each.

6. Trace the enlargement of our territory from the beginning to the present time, specifying, 1st. What was obtained? 2d. When? 3d. How? 1st pt, 6; last 2, 2 each.

7. Name five American inventors and their achievements. 5 pts, 2 each.

8. Trace the legislation concerning slavery from 1820 to 1860.

9. What effect has the Erie Canal on the business of the country? Show how. 1st pt, 4; 2d, 6.

10. Why was Webster called "The Great Expounder"? Clay "The Great Compromiser"? Calhoun "The Great Nullifier"? 4 off each om.

SPELLING.—1. Should words be divided into syllables so as to indicate the pronunciation or the derivation? 10

2. Indicate the pronunciation of the following words: *Depot*, *corps*, *aid-de-camp*, *vis-a-vis*, *fete*. 2 each.

3. Write the present participles of the words *frolic*, *traffic*, *mimic*, and explain the peculiarity. 2, 2, 2, 4.

4. When is *es* added to words ending in *o* to form the plural? 10

5. How are abbreviations indicated? When should shortened forms of names, as Sam, Rob, Phil, not be considered abbreviations? 5. 5.

6. Spell ten words dictated by the superintendent. 50

PENMANSHIP.—1. When pupils are writing what four things should receive constant attention? 10

2. What is meant by main slant? Connecting slant?

3. Give two questions which you would ask in training your pupils to criticise their own writing. 5. 5.

4. Name the principles used in forming the following: *m*, *b*, *i*, *y*, *M*. 5, 2 each.

5. How many kinds of curves are used in writing? Define each. 5. 5.

NOTE.—Your writing in answering these questions will be taken as a specimen of your penmanship, and will be marked so to o.

READING.—1. What is the word method? When should the phonic method be used in teaching small pupils?

2. What is pure tone, orotund, aspirate?

3. When are exclamations followed by commas, and when by exclamation points? Answer by an example of each. 5, 5.

4. Give a form of analysis of a selection. 10

5. How may some knowledge of American literature be imparted in the school-room? 10

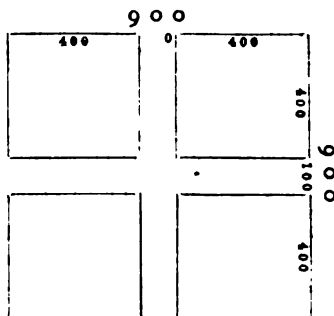
6. Read a paragraph of prose and a stanza of poetry selected by the superintendent. 25 each.

ANSWERS TO STATE BOARD QUESTIONS FOR NOVEMBER.

ARITHMETIC.—1. MDCCCXLI. = 1841
DCXL. = 640
MIV. = 1004
CCCXIX. = 319

MMMDCCCIV. = 3804

2. a. $\frac{4}{5}$ of $\frac{3}{4}$ = $\frac{12}{20}$
b. $\frac{3}{4}$ of $\frac{4}{5}$ = $\frac{12}{20}$
c. $\frac{3}{4} - (\frac{1}{5} + \frac{1}{5}) = \frac{10}{20} - \frac{2}{10} = \frac{8}{10}$.
3. Two places. The power of the factor 2 or 5 in the denominator.
4. a. 4 gals. of wine at \$4.10 cost \$16.40.
b. 4 gals. contain in gills $4 \times 4 \times 2 = 128$ gills.
c. 128 gills at 20 cts. a gill yields \$25.60.
d. \$25.60 — 16.40 = \$9.20, the profits.
5. a. A transverse section of the ditch forms a trapezoid, whose opposite parallel sides are 3 m. and 2 m., with an altitude of 1.5 m., the square contents of the trapezoid are therefore 3.75 s. m.
b. $150 \times 3.75 = 562.5$ c. m.
c. 562.5 c. m. at 50 cts. a c. m. yield \$281.25.
6. $56 : 52 :: 50.15 : 46.56 +$.
7. a. \$6,000. 6% stocks yield annual income of \$360.
b. $6,000 \times 90 + 155 = 3483.87$, which at 10% yields annual income of \$348.39.
c. $\$360 - \$348.39 = \$11.61$ loss in the exchange.
8. a. $\sqrt[3]{810,000} = 900$, therefore the following diagram must show the size of the lots:



- b. As the side of the square is 900 ft. and the street is 100 ft., the sides of the two lots will be 800 ft., or 400 ft. each.
- c. As one street is 900 ft. long and 100 ft. wide, it will contain 90,000 sq. ft. As the second street crosses the first it will contain 100 ft. less than the first, or 80,000 sq. ft., and the two streets will contain 170,000 sq. ft.
- d. $810,000 \text{ sq. ft.} - 170,000 \text{ sq. ft.} = 640,000$, and each lot $\frac{1}{2}$ of that, or 160,000.
- e. $\sqrt{160,000} = 400$, the side of each square.
9. The cow will eat from a circle which equals $40^2 \times 3.1416$, or 5026.56 sq. ft.
10. As a 5% stock at 75 yields $6\frac{2}{3}\%$ income, I must buy the 6% stock at a rate which will yield the same rate of income; and as $6\frac{2}{3}\%$ of \$90, I must buy the stock at 90.

GEOGRAPHY.—1. The *Pacific Ocean* is west of the New World and east of the Old, and is nearly oval in form.

The *Atlantic Ocean* is east of the New World and west of the Old. It has a narrow, bending form.

The *Indian Ocean* lies between the southern continents of the Old World, and is somewhat triangular in form.

The *Arctic Ocean* is the part of the sea which lies around the North Pole, and is nearly circular in form.

The *Antarctic Ocean* is that part of the sea which lies about the South Pole, and is the center from which the three great oceans proceed northward.

2. Climate denotes the condition of a place in regard to temperature, moisture, and healthfulness, the prevailing winds and character of the seasons. Latitude and elevation.

Zones are broad belts of the earth's surface in which the temperature varies but little.

3. The United States is in the southern part of North America, and is bounded on the north by British America; on the east by the Atlantic Ocean; on the south by Mexico and the gulf of Mexico; on the west by the Pacific Ocean.

4. Lower California and Yucatan.

5. Florida, Alabama, Mississippi, Louisiana, and Texas.

6. A line drawn from the head of lake Winepeg to the mouth of the Rio Grande, separates the low eastern from the high western half of the United States. The eastern half enjoys an abundance of moisture at all seasons, while the high western half has but little rain, except in the mountains and on the Pacific coast.

7. On the Atlantic coast; on the Mississippi and its great tributaries; and on the great lakes.

8. The Legislative, Judicial, and Executive.

9. High Europe and Low Europe.

10. The surface of England is generally level, except in the north where it is elevated and level. Ireland is hilly in the north and south, while in the middle it is a broad plain. In England and Ireland the winters are warm and the summers cooler than on the mainland.

PHYSIOLOGY.—1. The functions of the ligaments are (*a*) to hold the bones in place at the joints; (*b*) to limit the amount of their motion; and (*c*) at some points also to partly enclose and protect the joints.

3. The skin is a protective covering for the body (both by the cuticle and by the adipose layer), is an excretory organ, aids in regulating the temperature of the body, and, through its protected nerve termini, is a valuable sense-organ.

4 Organic substances used for food may be classed as albuminous, saccharine, oleaginous, and stimulating. The first include substances in which albumen is the chief ingredient, caseine, fibrin and gluten; the second, sugars and starches (which become sugars before use in the animal economy); the third, fats and oils and foods yielding oil in large quantities; the fourth, spices, liquors, etc.

5. Hunger and thirst are conditions of the general body, but located apparently at certain points because of the sources from which they are most easily satisfied, and because they would otherwise be confounded with other conditions.

7. To preserve the teeth, wash them regularly with a soft brush before retiring; do not pick them with metal tooth-picks; do not follow a very warm with a very cold drink and *vice versa*; have the tartar removed by a dentist as often as may be necessary; and when a decay appears, do not wait till the nerve is exposed and the tooth aches, but have the dentist fill the cavity at once.

8. Assimilation is the process by which living cells work up into their own substance material derived from sources external to themselves. The term is also sometimes extended to the processes by which certain cells secrete liquids to be used elsewhere in the body.

9. The change in the blood as the result of respiration takes place in the capillaries (*a*) of the lungs, and (*b*) of the whole body.

10. The cerebellum is supposed to regulate and to keep in proper equilibrium the muscular movements of the body. It is supposed by some to have special charge of movements that are automatic primarily, or that become so from habit or practice.

READING.—1. *Pitch* is a term used to denote the degree of elevation of the voice. Middle pitch is that of the ordinary conversational tone, and is commonly used in reading selections containing little emotion. High pitch is above the middle pitch, and is naturally used in lively, joyous selections. Females also frequently use it at

times of unusual excitement or anger. Low pitch is below middle pitch, and is frequently used to express awe, reverence, etc.

2. Among the errors in reading poetry may be mentioned, (*a*) usually the entire neglect of the cæsural pause; (*b*) the improper lengthening of the final pause; (*c*) the elevation of the voice at the beginning of each line and the gradual lowering of it toward the end; (*d*) the reading of the lines with a sort of tune; (*e*) reading as if the beauty of the thought consisted in the form of its expression, and hence without any responsive activity of the mind; and (*f*) losing sight of the rhetorical pause for the purpose of giving prominence to the rhyme.

3. The chief purpose of punctuation is to bring out the writer's meaning; to this extent it is an aid to the reader. But rhetorical pauses are entirely distinct from the pauses of connection or grammatical relation, though sometimes coinciding with them in position. The pauses of poetry are also independent of the grammatical pauses. Using the grammatical pauses to guide the voice must, therefore, make the reading mechanical, retard the expression of sentiment, and restrict emphasis and reflection to the words near the punctuation marks.

4. In connection with the reading lesson, the dictionary may be used, (*a*) to teach the diacritical marks; (*b*) to teach the pronunciation of words; (*c*) to teach the meaning of words; (*d*) to teach distinctions between words; (*e*) and to explain mythological and biographical allusions.

U. S. HISTORY.—I. 1492; 1497; 1524.

2. 73 years. First discovery in 1492; settlement of St. Augustine in 1565.

3. The desire for liberty of conscience in religious worship actuated the settlers of each colony named.

4. (*a*) The intelligence of the colonists. (*b*) The liberal constitution by which each was governed. (*c*) The early provisions made for public education.

5. (*a*) Brotherly love. (*b*) Peace, promotion of trade, general prosperity.

8. The Spanish occupied the territory around the Gulf of Mexico, and on the lower Mississippi. The Dutch were settled along the Hudson River, in the present territory of the State of New Jersey, and the western part of Long Island. The English were in New England and the territory now included in Maryland, Virginia, and North Carolina. The French occupied the land along the Gulf and River St. Lawrence, the Great Lakes, Ohio Basin, the upper Mississippi, with South Carolina and Georgia.

9. (*a*) French and Indian War. (*b*) A dispute concerning the

right of territory along the Ohio River. That the English people became the controlling power in North America.

10. The writings of this period were chiefly religious, historical, or biographical. Among religious writers, Cotton Mather and Jonathan Edwards are prominent. William Smith was the author of a "History of the Province of New York." John Winthrop wrote "The History of New England." Benjamin Franklin stands pre-eminent at this time as a writer upon miscellaneous topics, political and scientific. The poets of this period are few and their verses inferior.

GRAMMAR.—I. *a* Declarative; *b* Interrogative; *c* Imperative; and *d* Exclamatory. *a* I saw him cross the bridge. *b* Did he walk or ride? *c* Don't say another word. *d* What a beautiful day dawns upon us!

2. A collective noun is a noun expressing the idea of many in one. *a* A collective noun is singular when a number of persons or things are spoken of as one body; *b* A collective noun is plural when the individuals are spoken of as acting separately. *a* The fleet sailed on the 20th. *b* The committee did not agree as to what report should be made.

3. An infinitive is the most elementary form of the verb expressing action without the limitation of a subject. A participle assumes rather than asserts action of a substantive.

4. An adjective limits a noun by confining its meaning to a class possessing certain qualities expressed by the adjective. An adjective enlarges the meaning of a noun by associating with it some quality expressed by the adjective.

5. An idiom is an expression peculiar to the language in which it is found; as, Full many a flower is born to blush unseen.

6. Corrected: *a* *Who* do men say that I am? *b* My father allowed my brother and *me* to accompany him. *c* A fondness for show is, of all follies, the most vain. *d* Our parents did not study grammar as we *study* it. The auxiliary *do* could not be properly used with the verb root, as it puts the verb in the emphatic form—a form not required by the sense. *e* What *signify* fair words without good deeds?

7. The President having given his assent the bill became a law. *President* is in the nominative absolute, used with a participle. *Having given* is the perfect participle of the verb *give*, and modifies the noun *president*. *Bill* is subject of *became*. *Law* is predicate-nominative.

8. What do you mean? *What* is an interrogative pronoun, in objective case, governed by *mean*. *You* is nominative case, subject of *mean*.

9. "Whatever happens," exclaims Mary, "I am the wife of the Prince of Spain : crown, rank, life—all shall go before I take another husband."

MISCELLANY.

PROGRAMME FOR TOWNSHIP INSTITUTES—DEC. 1883.

L. P. HARLAN, SUPT. MARION COUNTY.

1. *Methods of Instruction.* (1) *a* What determines method? *b* What are the sources of all primary ideas? *c* What faculties in the child are first developed? (2) Classification of methods, as—*a* The object-lesson method. *b* The illustrative method. *c* The Socratic method. *d* The authoritative method. (3) *a* At what stage in the child's advancement is each method applicable? *b* To what different subjects are different methods adapted? *c* The combination of methods in one recitation, etc. Discussion by Institute.

2. *Reading*—Continued. (1) Reading as related to the intellect. *a* The meaning of words. *b* The form and construction of sentences. *c* The marks of punctuation. *d* The figures of composition. In this connection prepare an outline of topics, the answers to which will indicate a preparation of the lesson. (2) What means can the teacher adopt to excite the emotions of the pupil so that he may experience the feelings of the writer? (3) Methods in teaching delivery. *a* Expression—Imitation; rules to be followed; laws of taste. *b* Posture—Easy to himself; graceful. *c* Gesture—Those which assist in expression. Discussion.

3. *Arithmetic*—Continued. *a* How impart the idea of a fraction? Exercises in fractional expressions. Kinds of fractions by induction. Show from board, method of conducting operations in addition, subtraction, multiplication, and division of fractions. Illustrate form of board-work required of pupil, and write out the model of the explanation required, etc. Discussion.

4. *Penmanship*.—*a* Organization of school into classes; necessary materials; instruction in position and manner of holding pen; grouping small letters; analysis of letters by groups; criticism of copy-books. Show Institute your method of teaching the subject, using the blackboard in your analysis. Discussion.

5. *The Recitation*.—*a* The object to be reached directly and indirectly by the recitation. *b* The essentials of a well managed recitation. *c* Rules or points to be observed in conducting a recitation. *d* Reviews; their scope and frequency, etc. Discussion.

6. *Biographical Sketch*.—Subject to be selected by the writer.

7. *Elementary Grammar*.—(1) The parts of speech. *a* The noun. *b* Classes of nouns. *c* Written exercises in distinguishing one from the other. Show from the board how the properties of nouns may be taught inductively.

(2) Quotation marks.	} Examples under each. Discussion.
(3) Abbreviations.	
(4) Contractions, etc.	

8. *Offenses—Punishments*.—(1) Kinds of offenses, such as careless, unintentional acts, or deliberate offenses. (2) Means of preventing offenses, *i. e.*, such as employment, parental co-operation, and punishments. (3) The objects and kinds of punishments, etc. (4) Write out and give to the Institute ten rules which should govern the teacher in his conduct toward the school. Discussion.

9. *Literary Exercises*.—Oration, public reading, declamation, or other literary work. Adjournment.

By order of the Board of Education.

GOVERNMENT PUBLICATIONS.

The recent government publications are: (1) "Annual Report of the Board of Regents of the Smithsonian Institution for 1881"; (2) "Professional Papers of the Signal Service", Nos. 8, 9, 11, and 12—350 pages; (3) "Annual Report U. S. Life Saving Service, 1882.

The two first are invaluable to the libraries of high schools and colleges; they are of especial value in the teaching of physical geography.

School teaching naturalists will find the 100-page quarto "Arctic Cruise of the Revenue Steamer Corwin" replete with information as to Alaskan people and animals. The birds are by E. W. Nelson, one of the most accurate and observing of American ornithologists. The lithographic plates, seven in number, were drawn by Robert Ridgway. The book is issued from the government printing office, by the Treasury Department.

The best brief history of Alaska is by Joan Petroff, in the form of a communication to Secretary Schurz. Petroff collected census statistics.

Alaska has been a grave-yard to several naturalists. Robert Kennicott, the virtual founder of the Chicago Academy of Sciences, fell dead of heart disease, 500 miles up the Yukon, while exploring a route for telegraphic communication *via* Behring Straits, before "Cyrus laid the cable."

Charles L. McKay (Bachelor Science State University, 1881), enlisted in the Meteorological Bureau in the spring of 1881. He was a

special student of Prof. Jordan's at Butler, and went with Professors Jordan and Gilbert to the State University, where he did original work on fishes. Prof. Baird, of the Smithsonian, has written Prof. Gilbert that Mr. McKay fell through the ice among the islands of the Alaskan Sea. His gun was found, but the adventuresome student and naturalist, who as a lad in the Appleton, Wis., schools, became so interested in Prof. Jordan's charming "Story of a Stone," that he determined to become a student of nature, was seen no more.

Dr. H. Bannister, of Chicago, had his face frozen into permanent wrinkles at St. Michael's, Alaska. Young Nelson, of Chicago, who was five years at the same station, and made the most extensive collections of Arctic animals and Esquimaux ethnological material ever sent to Washington by any other Arctic explorer, suffered great privation and probably permanent impairment of his health.

Alaska is a great country for—the Alaska Commercial Company. No wonder Russia was willing to dispose of it.

TERMS TO AGENTS.

1. FOR A CLUB OF FIVE, I will give either of the following: Virgil, translated; The Koran (Mohammedan Bible); Don Quixote; Arabian Nights; Robinson Crusoe; Swiss Family Robinson; Pilgrim's Progress; The complete poetical works of either Milton, Byron, Burns, Dante, or Mrs. Hemens; Johnson's Lives of the Great Poets; The Russian Empire; Jane Eyre, John Halifax Gentleman, Ivanhoe, Baron Munchausen and Gulliver's Novels in one volume; Bacon's complete Essays; The French Revolution, by Carlisle.

2. FOR A CLUB OF TEN, any two of the above or either of the following: Shakespeare, complete; Taine's History of English Literature; Green's Short History of the English People; Life of Napoleon Bonaparte; Dickens' Child's History of England; The Last Days of Pompeii; Tom Brown's School days at Rugby; Children's Bible Stories; Oscar Browning's Educational Theories; Hopkins' Comic History of the U. S.; Caulkins' Primary Object Teaching; Carlyle's French Revolution; Notes and Talks on Teaching, by Col. F. W. Parker.

An enterprising teacher can easily work up a club in his township institute and among his acquaintances, and thus secure for himself some good books. These books are neatly bound in cloth.

THE RICHMOND NORMAL, Cyrus Hodgin, president, is having a rapid and healthy growth, and everybody connected with it is full of hope and confidence.

INDIANA STATE TEACHERS' ASSOCIATION.

The Thirtieth Annual Session of the Indiana State Teachers' Association will be held in Masonic Hall, Indianapolis, December 26th, 27th and 28th, 1883.

P R O G R A M M E.

WEDNESDAY EVENING, Dec. 6, 7:30.—1. Opening Exercises and Organization. 2. Address of retiring President, H. S. Tarbell, Supt. Public Schools, Indianapolis. 3. Inaugural Address of President Elect, Dr. John S. Irwin, Supt. Pub. Schools, Fort Wayne. 4. Appointment of Committees. 5. Miscellaneous Business and Adjournment.

THURSDAY, 9 A. M.—1. Opening Exercises. 2. Paper—"Separate Schools—For Whom shall they be Established"? C. W. Hodgen, Principal Richmond Normal School. Discussion opened by Sheridan Cox., Supt. Public Schools, Kokomo. Recess.

10:30 A. M.—3. Paper—"The Common Schools of a Quarter-Century Hence." Jas. Baldwin, Supt. Public Schools, Rushville. Discussion opened by John P. Mather, Supt. Public Schools, Warsaw.

Afternoon Session, 2 P. M.—1. Paper—"What Moral Results should Public School Training give? What Results does it give"? W. N. Hailman, Supt. Public Schools, Laporte. Discussion opened by L. E. Smedley, Co. Supt. of Putnam county. Recess.

3:00 P. M.—2. Paper—"The Model Teacher." Mary H. Krout, Crawfordsville. Discussion general. 3. Miscellaneous Business. 4. Adjournment.

Evening Session, 7:30.—1. Appointment of Committees. 2. Annual Address—"The Science of Education: its Nature, its Method, and some of its Problems." Wm. H. Payne, Professor of the Science and Art of Teaching University of Michigan.

FRIDAY, 9 A. M.—1. Paper—"School Houses and their Surroundings." W. M. Croan, Co. Supt. Madison county. 2. Paper—"The Study of English in the Public Schools." W. W. Parsons, State Normal School, Terre Haute. Discussion opened by J. H. Martin, Supt. Public Schools, Madison. Recess. 3. Paper—"Manual Labor Training in the Public Schools." Charles O. Thompson, President Rose Polytechnic School, Terre Haute. Discussion opened by W. W. Grant, Principal High School, Indianapolis.

Afternoon Session, 2:00.—1. Address—"School Incentives." Hon. B. G. Northrop, Sec. State Board of Education, Connecticut. Recess. 2. Report of Committee on officers. 3. Miscellaneous Reports. 4. Adjournment.

Papers will be limited to 30 minutes and the opening of discussions to 10 minutes.

HIGH SCHOOL SECTION—TO MEET DEC. 26, 2 P. M.

(1. Practical Value of Latin in High Schools. C. P. Doney, Logansport. Discussion, T. G. Alford, Vevay. (2) What and How in English Literature. Mrs. R. A. Moffitt, Rushville. Discussion, Miss L. D. Hadley, Richmond. (3) Requirements for Admission to High

School. R. G. Boone, Frankfort. Discussion, C. W. McClure, Crawfordsville.

Note.—Papers not to exceed 15 minutes. Executive Committee: S. E. Harwood, R. A. Ogg, and J. F. Warfel.

HOTELS.—To teachers presenting certificates of membership in the Association, the hotels will make reduced rates as follows: The Grand and Bates, \$2 per day; the Occidental and the Brunswick, \$1.50 per day.

RAILROADS.—All railroads centering at Indianapolis will give a uniform reduced rate of 2 cents per mile each way; tickets good going Dec. 25 to 26, and to Dec. 31 returning. Teachers wishing to attend must secure orders for round trip tickets from Geo. F. Bass, R. R. Secretary. All wishing reduced rates should at once write to the R. R. Secretary, stating plainly the road for which certificates are desired. Address Geo. F. Bass, School No. 3, Indianapolis, Ind. The headquarters of the Association will be at the Grand Hotel.

J. N. STUDY, Ch'n Ex. Com.

THE STATE TEACHERS' ASSOCIATION.—Special attention is called to the programme of the State Association. It is certainly a good one. There should be a large attendance. Teachers should take notice that to secure reduced rates they must (1) send to Geo. F. Bass, Indianapolis, for an order on local agent for round trip ticket. (2) Tickets are good coming only on the 25th and 26th, but are good returning till Monday 31st. Let every teacher come to the Association prepared and intending to pay his annual dues.

THE STATE NORMAL SCHOOL is moving on in its own unpretentious manner, yet doing vigorous work. Perhaps no other school in the state secures from its students so much close, logical thinking. In point of thoroughness and scientific professional drill the State Normal is exceptional.

MISHAWAKA.—Great harmony prevails here among all the school authorities. The new superintendent "fills the bill." The high school, with Geo. A. Powles principal, was never so full

MONROE COUNTY.—Supt. McGee has furnished us with some outlines for township institute work, which are full of good points. His system of reports are also very full and complete.

GREENFIELD.—The schools are full—96 more than at this date last year. The new superintendent, J. M. Strasburg, is reported as doing efficient and acceptable work.

SHELBYVILLE.—The reports from the Shelbyville schools are favorable to the new superintendent, W. H. Fertich.

THORNTOWN has a new school building, to be completed by Jan. 1st. L. M. Crist continues in charge.

The Iowa State Teachers' Association will meet at Des Moines, December 26, 27, 28.

The Winchester schools celebrated Garfield's birth-day Nov. 19th, with appropriate exercises.

Prof. E. E. Smith, of Purdue University, delivered a lecture before the Boswell Literary Society, on November 10th, that is highly spoken of.

✓ Purdue University has obtained the promise of \$20,000 for incidental expenses, by pledging the interest upon her endowment fund as security. This relieves her very serious embarrassment.

✓ A permanent normal school is being located at Angola. A company has been formed, six acres of land nicely located, purchased, and a new building about half completed. The faculty is not yet decided upon.

COUNTY INSTITUTES.

✓ **STEBEN COUNTY.**—The Steuben County Institute was held in Angola the week beginning November 19th. Supt R. V. Carlin had made very complete arrangements, and everything moved off like clockwork. The principal workers were Will. J. Houck, Supt. of Jay county; John M. Olcott and W. A. Bell, of Indianapolis; Prof. D. M. Fisk, of Hillsdale College, Mich.; and Miss Carrie B. Sharp, principal of Westminster Home School, Fort Wayne. The following home teachers gave valuable assistance: Charles Segur, E. Davis, Bart. Bigler. Evening lectures were delivered by Messrs. Houck, Bell, Fisk, Rev. Alex. Blackburn, of LaFayette, and Miss Sharp. The lectures were all free except the one by Rev. Blackburn, and all were largely attended. The institute was very large, the enrollment being 215, and the universal testimony was that no former one was equal to this in interest and profitable work. The Supt. managed to crowd in about ~~ten~~ 30-minute exercises per day, and a more effective week's work was never done in the county. Supt. Carlin is doing a work for which he deserves much credit.

✓ **DE KALB COUNTY.**—The Institute was held at Butler, Nov. 5-9. The attendance was good throughout, with an enrollment of 196. The institute room and the lecture room were filled to overflowing at each session. The instructors were Will. J. Houck, Supt. Jay Co.; W. A. Bell, editor Indiana School Journal, Indianapolis; J. M. Olcott, editor Educational Weekly, Indianapolis; H. B. Brown, Pres Normal School, Valparaiso; W. F. Yocum, Pres. Ft. Wayne College; John W. Holcombe, State Supt.; Geo. W. Zimmerman, Auburn; M. W. Har-

rison, Supt. schools, Auburn; T. J. Sanders, Supt. schools, Butler; C. A. Dugan, Supt. schools, Garrett; D. A. Holmes, Spencerville; T. S. Merica, Garrett; and J. A. McIntire, Auburn.

Evening lectures were delivered by the following: Will. J. Houck, subject "Lights and Shadows of the Teacher's Work"; W. A. Bell, "Why the State Educates"; W. F. Yocum, "The Teacher's Duty to Himself"; John W. Holcombe, "Early American Literature."

On Friday forenoon the institute was almost carried away by the eloquent and able treatment of the subject, "School Management," by Alex. Forbes, General Agent for Sheldon & Co., Chicago. Much credit is due Co. Supt. C. M. Merica, for the energy that characterizes his work. The institute was conceded by all to be the best in the history of the county.

T. J. SANDERS.

PERSONAL.

Bart. Bigler holds the helm at Hudson.

John Hahnman is the new head at Orland.

Asher Preston is "wielding the birch" at Hamilton.

H. H. Keep is principal of the Pleasant Lake schools.

Charles Segur directs the "young ideas" at Pleasant Lake.

E. Davis, a Hillsdale man, is principal of the Fremont schools.

Martha Gaskill, one of Steuben county's faithful teachers, has been a subscriber to this Journal for twenty years.

C. D. Bogart is principal of the high school, and not superintendent of Chattanooga schools, as stated last month.

Thos. J. Bryant has established a "Bryant's Business College" at Talbott's Block. He will be assisted by T. M. Herrold and C. N. Hamilton.

Hon. B. C. Hobbs, ex-State Supt., recently delivered an address at the "Old Settlers" meeting, having for his subject the life of the late John I. Morrison.

Gen. H. P. Hurst, at 34 Madison street, Chicago, is A. S. Barnes & Co.'s new agent for their educational works in Indiana. Gen. Hurst is an affable and pleasant gentleman, and will doubtless make many friends in our state.

Jerre Hillegas, Supt. of Allen county, has just submitted to the severe operation of having a tumor cut from the upper lid of one of his eyes. It was necessary to cut entirely through the lid, and there is danger that the eye will be permanently affected.

Annie E. H. Lemon, who has served the State Association so many years as recording secretary, has been compelled to resign her school on account of ill health.

Edward Taylor, Supt. of the Vincennes schools, is the author of a book about to be issued, entitled, "Does a Protective Tariff Benefit our People?" He answers in the negative.

Miss Carrie B. Sharp, principal of the Westminster Home School, did some superior work in the Steuben county institute, and her evening lecture was highly complimented on every hand.

Will. J. Houck, Supt. of Jay county, has been doing institute work in some of his neighboring counties. He is a clear thinker, a ready speaker, and a good judge of what teachers most need.

The death of Prof. S. K. Hoshour, ex-State Superintendent, and the oldest teacher in the state, is announced just as the Journal goes to press. An extended notice will be given next month.

A. B. Stevens, who has been principal of the Orland schools for seven terms past, has been elected superintendent of the Angola schools, and will assume the duties of his new position about Jan. 1st, in a new school building not yet completed.

J. Fraise Richard has changed his residence from Mansfield, O., to Irvington, Ind. He reports that the metamorphosis is gradually going on. We predict that when he is fully Hoosierized he will feel better than ever before. His new book, "The School and The Institute," will soon be out.

Dr. E. E. White, ex-President of Purdue University, has removed from LaFayette and has taken up his residence at Walnut Hill, a suburb of Cincinnati. Thus Indiana loses one of its most noted and most worthy citizens, and the cause of education in the state one of its ablest champions. Dr. White will devote himself to literary work in the educational line.

Supt. James Baldwin, of Rushville, is rivaling his well-earned success as an educator, in the field of literature. Some time since Scribners issued from his pen "The Story of Siegfried," the best juvenile narrative of the great German hero of mythology that has appeared on this side of the Atlantic. They now announce the Story of Roland from his pen.

Rev. Hiram A. Hunter, father of D. Eckley Hunter, one of Indiana's pioneer teachers, died Nov. 4th, at his residence in Louisville, Ky., aged 83 years, 83 days. His teaching was principally done from 1822 to 1834, at Washington, Logansport, and Princeton. He served as a member of General Jackson's body-guard in 1818, in the Seminole War. The world misses such a man when he dies.

BOOK TABLE.

Swinton's Story Teller, a weekly of complete tales, is published by the American News Co., New York, at the low price of ten cents a copy. The Thanksgiving number is very meritorious.

Greater Poems of Virgil. Edited by J. B. Greenough. Boston: Ginn, Heath & Co.

This is Vol. II. of Virgil's Poems. It contains the last six books of the *Æneid* and the *Georgics*. It is not completed by a vocabulary, but concludes with very helpful notes and illustrations.

Suggestions for "Christmas Entertainments," is the title of a pamphlet published by David C. Cook, Chicago. It is a collection of letters of suggestions from Sunday-School workers in various parts of the country, and will be found very helpful to all who are interested in this line of work. Price 25 cents.

English Classics. Published by Clark & Maynard, New York. No. 40 of these Classics is now given to the public, and contains "The Eve of St. Agnes," by John Keat. It is uniform with the 39 which have preceded it, and is supplied with foot-notes and Biography of the Author. The series contains standard poems and sketches, and in their convenient form and with their low price they are admirably fitted for their destiny, viz.: for the use of mixed classes in high schools and academies.

Object Lessons. By J. Walker. Philadelphia: J. B. Lippincott & Co.

This is a book designed to aid young teachers by furnishing suitable material for *object* or *oral* lessons. Its value will be appreciated by those persons who have not ready access to a reference library. It contains two series of lessons, each of which is divided into four parts. The first series is devoted to the animal, vegetable, and mineral kingdoms, while the second series treats of physiology, physical geography, and manufactures. In the arrangement of lessons, the author has furnished both matter and method which may be found in adjoining columns upon each page. It must meet the necessities of many teachers.

A Plea for Spoken Language. By James E. Murdoch. Cincinnati: VanAntwerp, Bragg & Co.

The reputation of the author of this book must create an interest in the book itself. The explanation upon the title page, which says it is "An Essay upon Comparative Elocution, condensed from lectures delivered throughout the United States," gives a key to its contents. Mr. Murdoch's object in giving this book to the public is to offer to educators whatever elocutionary principles or methods he

has found useful and helpful in his long career as actor, reader, and instructor. He combats the common theory that it is merely an imitative art, and places it upon a philosophic basis. The book closes with a reproduction of an essay on the dramatic passions, published in 1779, by Aaron Hill, who was contemporary with Garrick.

Short Studies in Literature, English and American. By A. P. Southwick, A. M. Philadelphia: Eldredge & Bro.

For the use of common schools, intermediate schools, and grammar schools, the title page states. To meet the requirements of pupils of these grades, the book is made brief. A short account of each author is given, but enough, it is hoped, to induce the student to hunt up additional matter for himself. An interesting and profitable chapter is devoted to the personal peculiarities of authors and a collection of pseudonyms under which many noted authors have written. It will well repay examination.

Harpers' Graded Arithmetics. A Two-Book Series. New York: Harper & Bros. W. J. Button, 379 Wabash ave., Chicago, Western Agent.

The FIRST BOOK comprises two years of oral and written work in the elements of numbers, and proceeds throughout on the inductive plan. Concrete numbers are used only to begin with. In short, the latest and best thoughts in primary teaching are employed. It is beautifully and uniquely illustrated.

The SECOND BOOK is a true companion of the first. The purpose of the author has been to make a "business arithmetic"—one involving every-day business transactions, and excluding all catches and puzzles, and involved problems that are not needed to illustrate principles. An Appendix contains the more advanced and less used parts, and may be used or not as time will allow. The books are *first-class*.

Harpers' Magazine for December is an *unusual* number of that most excellent monthly. Last year the publishers issued a Christmas number of *Harpers' Weekly*, which in size and beauty of illustration surpassed everything that had preceded it in the line of illustrated papers. This year the extra money, time, and care have been bestowed upon the December number of the monthly, which will be sold at the regular magazine price. The contributors to this Christmas edition embrace many illustrious names. John G. Whittier, W. D. Howells, Charles Reade, E. E. Hale, William Black, Chas. Dudley Warner, all contribute to increase its value.

Harpers' Weekly still remains unequalled in the character and style of both illustrations and reading matter. It is a very welcome visitor each week.

Harpers' Bazar is a standard in matters of fashion and etiquette, while the *Young People* is ever a favorite with all the girls and boys whose parents are kind enough to introduce them.

Wide-Awake for November does not fall behind in the number of its attractions. It appeals to the eye in its beautiful pictures and to the mind of the reader in its many delightful stories. It will contain in the numbers for 1884 a serial from the pen of Elizabeth Stuart Phelps, entitled "A Brave Girl." There will be two holiday issues, a Christmas number and a New Year's number. D. Lothrop & Co., publishers of "Wide-Awake," also publish a magazine for children younger than those who appreciate "Wide-Awake." It is entitled *Our Little Men and Women*. A special attraction for the coming year in this will be a delightful serial giving a glimpse of the home-life of Queen Victoria and her daughter the princess Beatrice in her summer palace in Scotland. *Babyland* completes this charming *trinity* of children's papers, and is especially fitted for the youngest children.

The Atlantic Monthly for December makes no extra display, but bears upon its pages its usual appearance. Its many readers glancing over the table of contents, and familiar with previous writings by the same author will say, "I wonder if chapters XI. and XII. of 'Roman Singer' can be more interesting than preceding chapters." Then there will be a glad feeling that one is to learn more of Ralph Waldo Emerson through the little sketch of his Aunt, Mary Moody Emerson. The contributors to this December number are Edmund C. Stedman, Richard Grant White, George Parsons Lathrop, and others, and the feeling that comes to the reader upon the perusal of the magazine is, "Well, No. 314 of Vol. LII. is equally as good as No. 1 of Vol. I. This magazine gives no space to pictures, but fills every inch with the best thoughts of the best writers of the age.

BUSINESS NOTICES.

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THE INDIANA, BLOOMINGTON & WESTERN RAILWAY AND OHIO SOUTHERN RAILROAD—On Sunday, November 18, at 12:28 P. M., the standard time now in use by these companies was changed to the 90th Meridian Time, to be called Central Time, which compares with the time now in use as follows: Cincinnati time is 22 minutes faster; Columbus, 28; Indianapolis, 16; Chicago, 8; St. Louis, 1 minute slower. From and after the date above named, the trains of these companies will be run by standard time, which is twenty-eight (28) min. slower than Columbus time, and sixteen (16) min. slower than Indianapolis time.

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12-12

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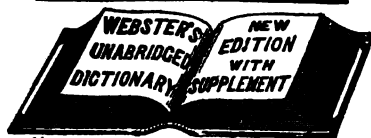
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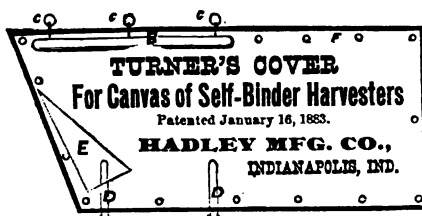
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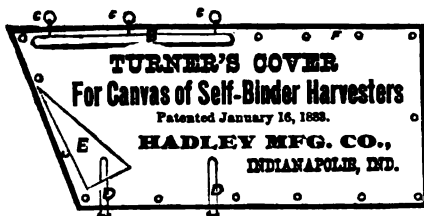
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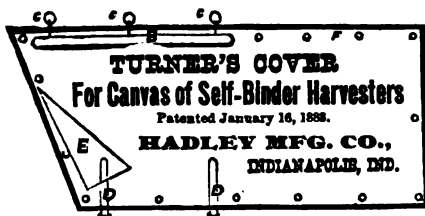
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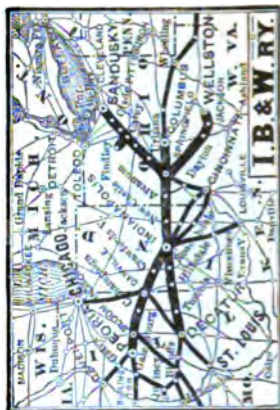
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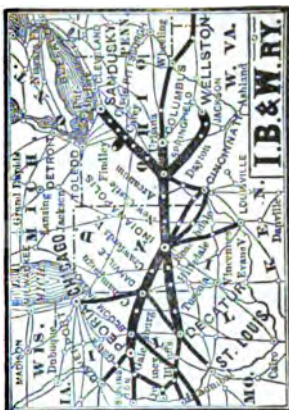
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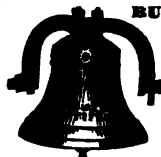
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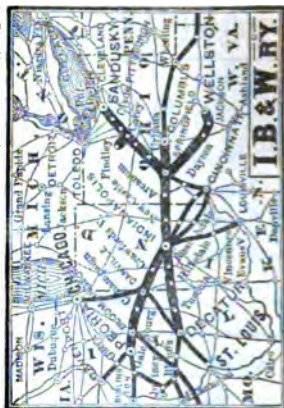
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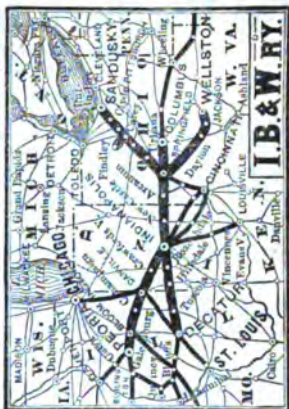
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
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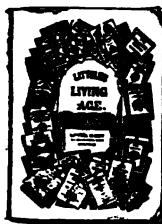
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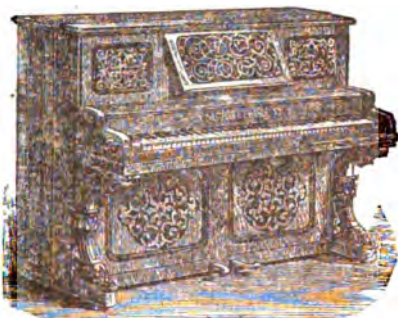
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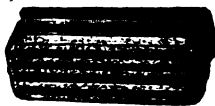
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NUMBER 4.

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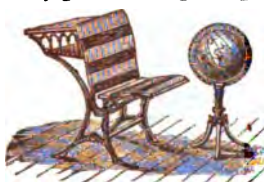
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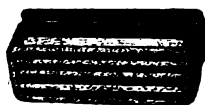
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1856—1883.

NUMBER 8.

AUGUST.

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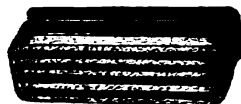
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